```
<210> 5022
<211> 886
<212> PRT
<213> S.epidermidis

<400> 5022
Tyr Asp Ile Ile Lys Asn Lys Arg Trp Ser Arg Met Thr Gln Phe Val
1               5                   10                  15
Tyr Ala Phe Asn Glu Gly Asn Ile Ala Met Lys Asp Leu Leu Gly Gly
                20                  25                  30
Lys Gly Ala Asn Leu Ser Glu Met Lys Arg Leu Gly Leu Pro Val Pro
        35                  40                  45
Asp Gly Phe Thr Ile Thr Thr Glu Ala Cys Ile Thr Tyr Leu Lys Gln
        50                  55                  60
Asn Glu Glu Leu Pro Thr Glu Val Lys Thr Gln Leu Ile Asp His Leu
65                  70                  75                  80
Ala Ala Phe Ser Lys Arg Thr Gly Lys Ala Phe Ser Ser Asp Asp Asn
                85                  90                  95
Leu Leu Leu Val Ser Val Arg Ser Gly Ala Lys Ile Ser Met Pro Gly
                100                 105                 110
Met Met Asp Thr Ile Leu Asn Leu Gly Leu Asn Asp Asp Asn Val Lys
            115                 120                 125
Lys Leu Val Asp Lys Thr Asn Asp Ala Arg Phe Ala Tyr Asp Cys Tyr
        130                 135                 140
Arg Arg Leu Leu Gln Met Phe Gly Glu Val Val Tyr Gly Ile Pro Met
145                 150                 155                 160
Thr Ala Phe Asp Thr Tyr Phe Asn Asp Phe Lys Thr Lys His Arg Tyr
                165                 170                 175
Gln Asn Asp Ala Glu Ile Pro Ala Glu Gly Leu Gln Thr Ile Cys Glu
                180                 185                 190
Lys Tyr Lys Glu Ile Tyr Val Glu Glu Ala Tyr Lys Pro Phe Pro Gln
            195                 200                 205
Glu Pro Leu Lys Gln Leu Glu Glu Ala Ile Glu Ala Val Phe Lys Ser
210                 215                 220
Trp Asp Asn Asp Arg Ala Arg Val Tyr Arg Asp Leu Asn Asp Ile Pro
225                 230                 235                 240
His Asp Ile Gly Thr Ala Val Asn Ile Gln Glu Met Val Phe Gly Asn
                245                 250                 255
Ser Gly Glu Asn Ser Gly Thr Gly Val Ala Phe Thr Arg Asn Pro Val
                260                 265                 270
Thr Gly Glu Asn His Leu Phe Gly Glu Tyr Leu Leu Asn Ala Gln Gly
            275                 280                 285
Glu Asp Val Val Ala Gly Ile Arg Thr Pro Lys Asp Ile Asp Thr Leu
        290                 295                 300
Lys Gln Gln Met Pro Asp Val His Gln Glu Phe Val Asp Val Thr Lys
305                 310                 315                 320
Gln Leu Glu Lys His Tyr Lys Asp Met Gln Asp Ile Glu Phe Thr Ile
            325                 330                 335
Glu Asn Gly Lys Leu Tyr Leu Leu Gln Thr Arg Asn Gly Lys Arg Thr
            340                 345                 350
Ala Lys Ala Ala Ile Lys Ile Ala Val Asp Leu Val His Glu Gln Leu
        355                 360                 365
Ile Thr Arg Glu Glu Ala Val Ser Lys Val Glu Val Lys Ser Ile Asp
        370                 375                 380
```

Gln Leu Leu His Pro Asn Phe Asn Glu Glu Ser Leu Lys Gln Ala Thr
385   390   395   400
Val Val Ser Lys Met Gly Leu Pro Ala Ser Pro Gly Ala Ala Thr Gly
              405   410   415
Lys Val Val Phe Ser Ala Glu Glu Ala Lys Leu Gln Ala Glu Asn Gly
              420   425   430
Asn Lys Val Val Leu Met Arg Pro Glu Thr Ser Pro Glu Asp Ile Glu
              435   440   445
Gly Met Val Ala Ser Glu Ala Ile Val Thr Thr His Gly Gly Met Thr
      450   455   460
Ser His Ala Ala Val Val Ala Arg Gly Met Gly Lys Cys Cys Val Thr
465   470   475   480
Gly Cys Ser Asn Val Glu Ile Asp Thr Val Asn Lys Thr Val Tyr Tyr
              485   490   495
Pro Glu Gly Glu Leu His Glu Gly Asp Ile Val Ser Val Asp Gly Ser
              500   505   510
Ala Gly Asp Leu Tyr Leu Gly Ala Ile Glu Thr Val Asn Ala Glu His
              515   520   525
Ser Glu Glu Phe Asp Gln Phe Met Thr Trp Ser Glu Glu Ile Ala Arg
      530   535   540
Leu Gln Val Arg Met Asn Ala Glu Thr Pro Gln Asp Ile Lys Ala Gly
545   550   555   560
Tyr Asn Phe Gly Ser Lys Gly Ile Gly Leu Val Arg Thr Glu His Met
              565   570   575
Phe Phe Gly Pro Glu Arg Leu Ile Glu Met Arg Arg Phe Ile Leu Ala
              580   585   590
Ser Asn His Asp Glu Arg Val Gln Ala Leu Glu Lys Ile Lys Thr Tyr
              595   600   605
Gln Val Glu Asp Phe Glu Thr Ile Phe Arg Leu Ser Gln Asp Arg Pro
      610   615   620
Thr Ile Val Arg Leu Leu Asp Pro Pro Leu His Glu Phe Leu Pro Ser
625   630   635   640
Ser Glu Glu Asp Ile Asn Asn Val Ser Gln Gln Leu Asn Val Ser Ser
              645   650   655
Glu Phe Leu Arg Lys Arg Ile Val Asp Leu Asn Glu Val Asn Pro Met
              660   665   670
Leu Gly His Arg Gly Cys Arg Leu Ala Val Thr Tyr Pro Glu Leu Tyr
      675   680   685
Glu Met Gln Val Glu Ala Ile Ile Glu Ser Val Ile Lys Leu Gln Lys
      690   695   700
Glu Gly Ile Thr Cys Leu Pro Glu Ile Met Ile Pro Leu Val Ser Thr
705   710   715   720
Val Glu Glu Phe Thr Thr Leu Lys Glu Arg Leu Val Asn Thr Ile Thr
              725   730   735
His Leu Glu Lys Glu Ser Gln Gln Asp Ile Gln Tyr Met Ile Gly Thr
              740   745   750
Met Ile Glu Thr Pro Arg Ala Cys Leu Ile Ala Asn Asp Leu Ala Lys
      755   760   765
His Cys Asp Phe Phe Ser Phe Gly Thr Asn Asp Leu Thr Gln Leu Thr
770   775   780
Phe Gly Phe Ser Arg Asp Asp Ala Gly Lys Phe Ile Asn Val Tyr Thr
785   790   795   800
Glu Asn Asn Ile Leu Gln Leu Asp Pro Phe Gln Thr Leu Asp Arg Glu
              805   810   815
Gly Val Gly Arg Leu Ile Gln Leu Ala Val Glu Gln Ala Lys Asn Thr
              820   825   830

```
Asn Pro Glu Ile Lys Ile Gly Val Cys Gly Glu Leu Gly Gly Asp Ala
        835                 840                 845
Lys Ser Ile Arg Lys Phe Asn Gln Trp Glu Ile Asp Tyr Val Ser Cys
        850                 855                 860
Ser Pro Phe Arg Val Pro Gly Ala Ile Leu Ala Thr Ala Gln Ser Gln
865                 870                 875                 880
Ala Glu Glu Ser Glu Arg
                885
```

<210> 5023
<211> 214
<212> PRT
<213> S.epidermidis

<400> 5023
```
Gly Leu Ile Met Lys Ala Phe Leu Gln Glu Tyr Gly Ser Gln Leu Leu
1               5                   10                  15
Ser Lys Ala Val Glu His Phe Tyr Ile Ser Met Phe Ala Leu Leu Leu
        20                  25                  30
Ala Ile Val Val Ala Val Pro Leu Gly Ile Leu Leu Ser Lys Thr Gln
        35                  40                  45
Arg Thr Ala Asn Val Val Leu Thr Val Ala Gly Val Leu Gln Thr Ile
        50                  55                  60
Pro Thr Leu Ala Val Leu Ala Ile Met Ile Pro Ile Phe Gly Val Gly
65                  70                  75                  80
Lys Thr Pro Ala Ile Val Ala Leu Phe Ile Tyr Val Leu Leu Pro Ile
                85                  90                  95
Leu Asn Asn Thr Val Leu Gly Val Lys Asn Ile Asp Lys Asn Val Ile
                100                 105                 110
Gln Ala Gly Gln Ser Met Gly Met Thr Lys Phe Gln Leu Met Lys Asp
        115                 120                 125
Val Glu Met Pro Leu Ala Leu Pro Leu Ile Ile Ser Gly Ile Arg Leu
        130                 135                 140
Ser Ser Val Tyr Val Ile Ser Trp Ala Thr Leu Ala Ser Tyr Val Gly
145                 150                 155                 160
Ala Gly Gly Leu Gly Asp Leu Val Phe Asn Gly Leu Asn Leu Tyr Gln
                165                 170                 175
Pro Pro Met Ile Ile Ser Ala Ala Ile Val Val Thr Leu Leu Ala Leu
                180                 185                 190
Val Ile Asp Phe Ile Leu Ser Leu Val Glu Lys Trp Val Val Pro Lys
        195                 200                 205
Gly Leu Lys Val Ser Arg
        210
```

<210> 5024
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5024
```
His Glu Ile Met Ser Gln Thr Phe Phe Thr Tyr Lys Glu Gly Ile Ser
1               5                   10                  15
Lys Phe Tyr Asn Cys Leu Asn Asn Val Lys Gly Pro Ile Lys Arg Asp
                20                  25                  30
Tyr Arg Lys Ile Glu Gln Ile Lys Pro Val Ala Arg Arg
        35                  40                  45
```

<210> 5025
<211> 962
<212> PRT
<213> S.epidermidis

<400> 5025
Lys Arg Ile Met Ile Ile Arg Ser Val Lys Met Lys Asn Ala Leu Lys
1   5   10   15
Leu Phe Ile Thr Asp Leu Lys Arg Val Ala Lys Thr Pro Gly Val Trp
            20   25   30
Val Ile Leu Ala Gly Leu Ala Ile Leu Pro Ser Phe Tyr Ala Trp Phe
            35   40   45
Asn Leu Trp Ala Met Trp Asp Pro Tyr Gly His Thr Gly His Ile Lys
        50   55   60
Val Ala Val Val Asn Glu Asp Gln Gly Glu Lys Val Arg Gly Lys Asn
65   70   75   80
Ile Asn Val Gly Asn Lys Met Val Lys Thr Leu Lys Lys Asn Asp Ser
                85   90   95
Phe Asp Trp Gln Phe Val Ser Arg Glu Lys Ala Asp His Glu Ile Lys
            100   105   110
Met Gly Lys Tyr Tyr Ala Gly Ile Tyr Ile Pro Lys Lys Phe Thr His
        115   120   125
Glu Ile Thr Gly Thr Leu Arg Lys His Pro Gln Lys Ala Asp Ile Asp
    130   135   140
Phe Lys Val Asn Gln Lys Ile Asn Ala Val Ala Ala Lys Leu Thr Asp
145   150   155   160
Thr Gly Ser Ser Phe Val Ile Asp Lys Ala Asn Lys Gln Phe Asn Lys
                165   170   175
Thr Val Ala Thr Ala Leu Leu Ser Glu Ala Asn Lys Val Gly Leu Ser
            180   185   190
Ile Glu Asp Asn Val Pro Thr Ile Asn Lys Ile Lys Ser Ala Val Tyr
        195   200   205
Gln Ala Asn Asn Ser Leu Pro Lys Ile Asn Gln Phe Ala Asp Lys Ile
    210   215   220
Ile Glu Leu Asn Lys His Gln Asp Asp Leu Asp Ala Tyr Ala Asn Gln
225   230   235   240
Phe Arg Ser Leu Gly Lys Tyr Lys Gly Asn Val Leu Asp Ala Gln Glu
                245   250   255
Lys Leu Asn Ala Val Asn Ser Ser Ile Pro Ala Leu Asn Glu Arg Ala
            260   265   270
Lys Leu Ile Leu Ala Leu Asp Ser Tyr Met Pro Asn Ile Glu Arg Ile
        275   280   285
Leu Asn Val Ala Ala Asn Asp Val Pro Ala Gln Phe Pro Arg Ile Asn
        290   295   300
Arg Gly Val Asp Ile Ala Ser Glu Gly Ile Asp Ala Ala Ser Gly Gln
305   310   315   320
Leu Asn Asp Ala Lys Gly Tyr Leu Thr Gln Ala Lys Ala Arg Val Gly
            325   330   335
Asp Tyr Gln Glu Ala Ala Gly Arg Ala Gln Asp Val Asn Asn Gln Ala
            340   345   350
Asn Gln Asn Leu Arg Asn Gln Thr Ser Thr Thr Pro Gln Ser Ala Ile
        355   360   365
Lys Ser Ser His Ser Glu Gly Lys Ser His Ser Ser Ile Lys Thr Val
    370   375   380
Pro Val Ser Gln Ser Gly Glu Asn Gln Pro Val Tyr Gly Asp Asn Ile

```
385                     390                     395                     400
Leu Ser Asn Ser Asp Val Lys Ser Met Asn Thr Ala Leu Thr Glu Ala
                405                     410                     415
Leu Leu Ser Leu Ser Asn Gln Thr Asp Gln Gln Ala Gln Ala Thr Gln
                420                     425                     430
Gln Asp Ile Lys Ser Leu Lys Asn Ile Ala Tyr Gly Val Ile Ala Ser
                435                     440                     445
Asp Lys Pro Ser Glu Phe Lys Glu Pro Leu Lys Asn Ile Lys Ser Arg
    450                     455                     460
Leu Glu Asn Ala Ser Lys Tyr Asn Gln Gln Phe Ile Asp Ile Leu Ser
465                     470                     475                     480
Glu Leu Glu Lys Ser Glu His Val Asp Leu Ser Asn Glu Ile Lys Gln
                485                     490                     495
Val Lys Glu Ala Asn Asn Ser Ile Asn Asp Asn Leu Lys Ser Thr Asn
                500                     505                     510
Gln Leu Ile Asp Ala Leu Ser Asn Gly Ser Ser Gly Gln Leu Glu Ala
                515                     520                     525
Val Asn Val Leu Arg Asp Leu Pro Asn Leu Asn Lys Arg Leu Asp Thr
                530                     535                     540
Leu Arg Asn Tyr Ile Lys Lys Glu Leu Asn Arg Asn Leu Leu Ala Val
545                     550                     555                     560
Ser Asn Glu Ile Thr Asp Gln Leu Asn Lys Gly Gln Asn Thr Leu Ser
                565                     570                     575
Thr Ile Gln Ser Lys Leu Asn Thr Ile Asn Arg Val Ile Asn Ala Gly
                580                     585                     590
Gln Asp Ile Leu Asn Ser Gly Lys Lys Arg Ile Asp Thr Ile Gln Thr
                595                     600                     605
Ala Leu Pro Ala Ile Glu Asn Ala Tyr Ile Asn Ala Met Arg Thr Ala
    610                     615                     620
Gln Ala Tyr Phe Pro Thr Ala Lys Lys Asp Val Ala Lys Ala Ala Asp
625                     630                     635                     640
Phe Val Arg Asn Asp Leu Pro Gly Leu Glu Arg Glu Leu Ala Asn Val
                645                     650                     655
Thr Gln Ser Val Asn Gln Lys Ile Pro Ser Leu Phe Ser Arg Tyr Asp
                660                     665                     670
Asn Ala Val Asp Leu Leu Asn Glu Lys Gln Pro Gln Ala Lys Glu Ala
                675                     680                     685
Leu Ala Ser Leu Ala Asp Phe Ser Glu Asn Lys Leu Pro Asp Val Glu
    690                     695                     700
Lys Asp Leu Lys Lys Ala Asn Lys Ile Phe Lys Lys Leu Asp Lys Asp
705                     710                     715                     720
Asp Ala Val Asp Lys Leu Ile Asp Thr Leu Lys Asn Asp Leu Lys Lys
                725                     730                     735
Gln Ala Asp Ile Val Ala Asn Pro Ile Asn Lys Lys Thr Thr Asp Val
                740                     745                     750
Phe Pro Val Lys Asp Tyr Gly Ser Gly Met Thr Pro Phe Tyr Thr Ala
                755                     760                     765
Leu Ser Ile Trp Val Gly Gly Leu Leu Met Val Ser Leu Leu Ser Val
    770                     775                     780
Asp Asn Lys His Glu His Leu Gln Pro Ile Met Thr Lys Arg Gln Val
785                     790                     795                     800
Tyr Leu Gly Lys Ser Gly Phe Phe Phe Leu Leu Gly Ile Ile Gln Ala
                805                     810                     815
Leu Ile Val Ser Ile Gly Asp Leu Val Ile Leu Lys Ala Ser Ile Glu
    820                     825                     830
Ser Pro Ile Leu Phe Val Ser Ile Ala Val Phe Ser Ser Leu Val Phe
```

```
              835                     840                     845
Asn Ser Ile Ile Tyr Thr Ser Val Ser Leu Leu Gly Asn Pro Gly Lys
      850                     855                     860
Ala Val Ala Ile Ile Leu Leu Val Leu Gln Ile Ala Gly Gly Gly Gly
865                     870                     875                     880
Thr Phe Pro Ile Gln Thr Thr Pro Glu Phe Phe Gln Ala Ile Ser Pro
                  885                     890                     895
Tyr Leu Pro Phe Thr Tyr Ser Ile Asp Ala Leu Arg Glu Thr Val Gly
              900                     905                     910
Gly Ile Val Pro Glu Ile Leu Ile Thr Lys Val Ile Ile Leu Gly Leu
          915                     920                     925
Phe Gly Ile Gly Phe Met Val Val Gly Tyr Cys Leu Lys Pro Val Thr
      930                     935                     940
Asp Pro Ile Ile Arg Lys Ile Ala Glu Lys Ala Asp Glu Ser Lys Val
945                     950                     955                     960
Thr Glu
```

```
<210> 5026
<211> 77
<212> PRT
<213> S.epidermidis

<400> 5026
Lys Leu Ile Ile Lys Asn Val Glu Arg Phe His Tyr Lys Arg Lys Asn
1               5                   10                  15
Phe Pro Lys Asn Thr Cys Gln Ile Thr Cys Asn Met Leu Val Tyr Tyr
            20                  25                  30
Tyr Ile Phe Thr Leu Met Tyr Tyr Arg Thr Lys Glu Phe Gly Val Arg
        35                  40                  45
Glu Gly Trp Leu Lys Tyr Glu Gln Tyr His His Phe Asn Glu Arg Lys
    50                  55                  60
Gly Ile Thr Phe Phe Lys Val Phe Ser Ser Thr Lys Ile
65                  70                  75
```

```
<210> 5027
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5027
Lys Asn Val Ile Leu Cys Leu Phe Ile Tyr Glu Ile Asn Glu Tyr Glu
1               5                   10                  15
Leu Ile Ala Val Phe Phe Val Asn Lys Asp Ile Asn Ser Met Pro Leu
            20                  25                  30
Leu Lys Asp Tyr Leu Leu Gly His Thr His Leu Tyr Val
        35                  40                  45
```

```
<210> 5028
<211> 252
<212> PRT
<213> S.epidermidis

<400> 5028
Leu Phe Val Ile Met Ile Ile Gln Lys Gly Gly Ile Ile Met Ile Gly
1               5                   10                  15
```

```
Asn Ile Leu Val Ala His Gly Met Arg Lys Gly Asn Gln Asn Glu Ala
            20                  25                  30
Leu Glu Glu Phe Ile Gly Thr Leu Leu Lys Asp Glu Gln Tyr Tyr Tyr
        35                  40                  45
Glu Leu Ala Phe Leu Glu Ser Glu Thr Gln Asn Leu Glu Ile Ile Met
    50                  55                  60
Glu Lys Met Ile Lys Gln Gly Ile Thr Lys Phe Arg Ile Val Pro Leu
65                  70                  75                  80
Leu Ile Phe Ser Ala Met His Tyr Ile Ser Asp Ile Pro Gln Ile Leu
            85                  90                  95
Lys Glu Met Lys Ala Arg Tyr Pro Gln Ile Asp Ser Lys Met Ser Ala
            100                 105                 110
Pro Leu Gly Thr His Pro Tyr Met Lys Thr Leu Val Glu Asn Arg Ile
        115                 120                 125
Ala Asp Glu Lys Val Ser Glu Gly Ser Thr Lys Ala Thr Ile Val Ile
    130                 135                 140
Ala His Gly Asn Gly Ser Gly Arg Phe Thr Lys Ala His Asp Glu Leu
145                 150                 155                 160
Lys Ala Phe Val Lys Thr Leu Asp Ser His His Pro Val Tyr Ala Arg
            165                 170                 175
Ala Leu Tyr Gly Thr Leu Ala Phe Lys Asn Asp Leu Asp Lys Ile Ser
            180                 185                 190
Glu Gln Tyr Asp Glu Leu Val Ile Val Pro Leu Phe Leu Phe Asp Gly
        195                 200                 205
Arg Leu Val Asn Lys Val Lys Arg Leu Leu Gly Glu Met Thr Leu His
    210                 215                 220
Ser Gln Leu His Ile Thr Pro Ser Ile Asn Phe Asp Pro Ile Leu Arg
225                 230                 235                 240
Leu Ile Ile Arg Glu Arg Leu Glu Ala Leu Asp Ile
            245                 250
```

<210> 5029
<211> 522
<212> PRT
<213> S.epidermidis

<400> 5029
```
Arg Arg Ser Ile Gly Leu Lys Ile Lys Ala Gln Val Ala Met Val Leu
1               5                   10                  15
Asn Leu Asp Lys Cys Ile Gly Cys His Thr Cys Ser Val Thr Cys Lys
            20                  25                  30
Asn Thr Trp Thr Asn Arg Pro Gly Ala Glu Tyr Met Trp Phe Asn Asn
        35                  40                  45
Val Glu Thr Lys Pro Gly Val Gly Tyr Pro Lys Arg Trp Glu Asp Gln
    50                  55                  60
Gly Gln Tyr Lys Gly Gly Trp Val Leu Asn Lys Lys Gly Lys Leu Glu
65                  70                  75                  80
Leu Lys Ser Gly Asn Arg Trp Ser Lys Ile Ala Leu Gly Lys Ile Phe
            85                  90                  95
Tyr Asn Pro Asp Met Pro Leu Ile Gln Asp Tyr Tyr Glu Pro Trp Thr
            100                 105                 110
Tyr Asn Tyr Glu His Leu Thr Asn Ala Lys Gln Gly Gln His Ser Pro
        115                 120                 125
Val Ala Thr Ala His Ser Leu Ile Ser Gly Asp Arg Leu Asn Leu Lys
    130                 135                 140
Trp Gly Pro Asn Trp Glu Asp Asp Leu Ala Gly Gly His Ile Thr Gly
```

```
145                    150                     155                    160
Pro Glu Asp Pro Asn Ile Gln Lys Ile Glu Glu Asp Ile Lys Phe Gln
                165                 170                 175
Phe Asp Glu Thr Phe Met Met Tyr Leu Pro Arg Leu Cys Glu His Cys
            180                 185                 190
Leu Asn Pro Ser Cys Val Ala Ser Cys Pro Ser Gly Ala Met Tyr Lys
        195                 200                 205
Arg Asp Glu Asp Gly Ile Val Leu Val Asp Gln Glu Ala Cys Arg Gly
    210                 215                 220
Trp Arg Tyr Cys Met Thr Gly Cys Pro Tyr Lys Lys Val Tyr Phe Asn
225                 230                 235                 240
Trp Lys Thr Asn Lys Ala Glu Lys Cys Thr Phe Cys Phe Pro Arg Ile
            245                 250                 255
Glu Ala Gly Met Pro Thr Val Cys Ser Glu Thr Cys Thr Gly Arg Met
            260                 265                 270
Arg Tyr Leu Gly Val Leu Leu Tyr Asp Ala Asp Arg Val Gln Glu Ala
        275                 280                 285
Ala Ser Ala Lys Asp Glu Lys Asp Leu Tyr Glu Lys Gln Leu Asp Leu
        290                 295                 300
Phe Leu Asp Pro Phe Asp Glu Glu Val Ile Ala Gln Ala Glu Lys Asp
305                 310                 315                 320
Gly Ile Asn Gln Glu Trp Ile Thr Ala Ala Gln Asn Ser Pro Val Tyr
                325                 330                 335
Lys Leu Ala Ile Glu Tyr Lys Met Ala Phe Pro Leu His Pro Glu Phe
            340                 345                 350
Arg Thr Met Pro Met Val Trp Tyr Cys Pro Pro Leu Ser Pro Ile Met
            355                 360                 365
Ser Tyr Phe Glu Gly Glu Asn Ala Gly Gln Asn Pro Asp Met Ile Phe
        370                 375                 380
Pro Ala Ile Glu Glu Met Arg Leu Pro Ile Gln Tyr Leu Ala Asn Leu
385                 390                 395                 400
Leu Thr Ala Gly Asp Thr Lys Pro Val Lys Glu Gly Leu Gln Lys Met
            405                 410                 415
Ala Met Met Arg Ser Tyr Met Arg Ser Gln Ile Thr Asn Gln Pro Phe
            420                 425                 430
Asp Thr Ser Lys Leu Glu Arg Leu Gly Leu Thr Glu Arg Gln Met Thr
        435                 440                 445
Glu Met Tyr Arg Leu Leu Gly Ile Ala Lys Tyr Glu Asp Arg Phe Val
    450                 455                 460
Val Pro Ser Ser His Lys Glu Thr Tyr Leu Asp Thr Tyr Lys Ala Gln
465                 470                 475                 480
Gly Ser Gln Gly Tyr Gly Gly Glu Tyr Phe Gly Ser Asn Cys Glu Gly
                485                 490                 495
Cys Gly Val Ala Val Gln Ser Gly Lys Thr Gly Gln Glu Ile Tyr Asn
            500                 505                 510
Glu Asn Phe Tyr Gly Gly Ile Phe Arg Asp
        515                 520
```

<210> 5030
<211> 69
<212> PRT
<213> S.epidermidis

<400> 5030

```
Thr Ile Pro Ile Ile Leu Pro Leu Phe Phe Ala Asp Val Ser Ile Ala
1               5                   10                  15
```

Val Ser Ala Lys Thr Phe Thr Ile Met Ser Glu Ala Ala Ala Glu Asp
        20   25   30
Lys Ile Arg Pro Thr Thr Ile Ile Pro Lys Cys Gly Ala Met Ala Ile
        35   40   45
Ile Pro Phe Pro Lys Ile Lys Thr Ile Asn Val His Asn Asn Thr Asp
    50   55   60
Arg Glu Glu Asn Arg
65

<210> 5031
<211> 66
<212> PRT
<213> S.epidermidis

<400> 5031
Thr Ser Ala Met Ala Cys Val Phe Leu Ala Gly Gly Ala Thr Val Ala
1   5   10   15
Ala Thr Leu Ile His Thr Pro Lys Asn Gly Ala Cys Ile Ala Ala Asp
        20   25   30
Met Ser Leu Asp Asn Asn Asn Thr Leu Lys Phe Gly Ala Asn Ile Pro
        35   40   45
Thr Lys Leu Leu Ile Ile Lys Ile Ala Thr Lys Ile Gly Asn Arg Arg
    50   55   60
Trp Ala
65

<210> 5032
<211> 76
<212> PRT
<213> S.epidermidis

<400> 5032
Thr Arg Gln Ile Val Arg Phe Ile Ser Phe Val Glu Thr Ser Ile Ile
1   5   10   15
Val Leu Val His Ser Ile Thr Leu Arg Leu Ile Phe Lys Ile Leu Ala
        20   25   30
Leu Asn Ile Ile Thr Ile Thr Ser Ser Ile Ala Leu Thr Cys His Leu
        35   40   45
Phe Thr Leu Ile Leu Tyr Phe Asn Lys Leu Asn Arg Tyr Thr Phe Ile
    50   55   60
Arg Ala Ser Ser Tyr Lys Leu Cys Arg Gln Ala Ile
65   70   75

<210> 5033
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5033
Arg Ile Lys Ile Leu Lys Thr Tyr Arg Ser Leu Leu Met Ala Met Ser
1   5   10   15
Leu Phe Ile Ile Val Asn Tyr Lys Glu Met Lys Lys Ile Ile Ile Phe
        20   25   30
Ile Asn Ser Lys Tyr Asn Phe Val Glu Glu Lys Phe Lys Asn
        35   40   45

```
<210> 5034
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5034
Tyr Pro Lys Met Val Leu Ile Thr Asn Pro Val Met Thr Asp Thr Val
1               5                   10                  15
Ile Thr Lys Asn Pro Gly Ile Ile Lys Leu Val Gly Leu Val Leu Pro
            20                  25                  30
Val Ser Ser Ser Ser Thr Ala Asn Asn Ser Val Gly
        35                  40


<210> 5035
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5035
Asn His Lys Ile Phe Phe Glu Met Ile Gly Arg Gln Val Ala Ile Lys
1               5                   10                  15
Met Met Lys Lys Arg Cys Ala Thr Asn His His Ala Asn Ser Phe Gln
            20                  25                  30
Leu Lys Glu Lys Asn Gly Arg Cys Ala Arg Lys Thr Arg Ser Gly Tyr
        35                  40                  45
Ile Lys Val Asn Ile Asn Thr Lys Gly Lys Tyr Ala Arg
    50                  55                  60


<210> 5036
<211> 82
<212> PRT
<213> S.epidermidis

<400> 5036
Thr Cys Lys Ile Ile Tyr Asn Arg Tyr His Asn Tyr Trp Gly Leu Glu
1               5                   10                  15
Thr Leu Arg Glu Gly Glu Thr Met Ile Phe Val Met Leu Ser Pro Ile
            20                  25                  30
Leu Ile Ile Leu Phe Ile Val Leu Ser Val Leu Glu Glu Lys Arg Arg
        35                  40                  45
Lys Lys Asn Ser Lys Glu Gln Asn Ser Asn His Val Asp Gln Gln Gln
    50                  55                  60
Tyr Asp Tyr Thr Asp Lys Glu Gln Gln Gln Asn Lys Asn Ser Asn Asp
65                  70                  75                  80
Asp Lys


<210> 5037
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5037
Lys Leu Lys Ile Leu Glu Val Glu Trp Asn Arg Arg Asn Lys Lys Ala
1               5                   10                  15
Leu Thr Asn Val Lys Phe Leu Ile Pro His Ala Asn Glu Ile Gly Met
```

```
                20                       25                      30
Ala Gln Arg Thr Ile Gly Glu Arg Arg His Leu Leu Tyr Glu
        35                       40                      45
```

<210> 5038
<211> 402
<212> PRT
<213> S.epidermidis

<400> 5038
```
Gly Glu Lys Met Phe Lys Lys Phe Glu Tyr Lys Ile Leu Tyr Lys Arg
1               5                       10                      15
Ile Phe Phe Thr Cys Leu Ile Leu Val Ile Tyr Ile Ile Gly Ser Asn
                20                      25                      30
Ile Ser Ile Val Ser Asn Glu Asn Leu Arg Thr His Lys Asp Ser Phe
                35                      40                      45
Phe Lys Leu Ala Ile Thr Asn Val Gly Gly Asp Leu His Thr Leu Asn
        50                      55                      60
Ile Phe Ser Leu Gly Leu Gly Pro Trp Leu Ser Ser Met Ile Ile Leu
65                      70                      75                      80
Thr Leu Ile Asn His Lys Ser Asn Asp Lys Val Lys Thr Gln Thr Arg
                85                      90                      95
Arg Glu Arg His Phe Lys Glu Arg Ala Leu Thr Leu Ile Ile Ser Ala
                100                     105                     110
Ala Gln Gly Phe Tyr Ile Ile His Ser Tyr Ile Asn Lys His Ala Ile
                115                     120                     125
Lys Asp Ser Asn Met Leu Ile Leu Leu Val Leu Ile Thr Gly Thr
        130                     135                     140
Leu Leu Met Val Trp Leu Ala Asp Gln Asn Thr Thr Tyr Gly Ile Ser
145                     150                     155                     160
Gly Pro Met Pro Ile Val Leu Met Ser Leu Val Lys Ser Ile Phe Asn
                165                     170                     175
Thr Pro Phe Pro Lys Leu Asn Ser Ser Ala Ser Leu Ile Thr Met Ile
                180                     185                     190
Ile Val Leu Leu Val Leu Asp Leu Phe Ile Leu Phe Phe Ile Glu Leu
                195                     200                     205
Thr Glu Tyr Arg Ile Glu Tyr Asn Asp Ile Met Asn Ile Ser Ala Lys
        210                     215                     220
Asp Ile Pro Ser Tyr Leu Ser Trp Lys Leu Asn Pro Ala Gly Ser Ile
225                     230                     235                     240
Ser Ile Met Val Ser Leu Ser Leu Phe Met Leu Thr Asn Asn Ile Val
                245                     250                     255
Asn Phe Ile Gly Arg Phe Ile Val Asn His Asn Phe Glu Thr His Val
                260                     265                     270
Phe Asn Phe Thr Asn Pro Val Gly Ile Thr Ile Tyr Leu Leu Leu Gln
        275                     280                     285
Met Ile Leu Gly Tyr Phe Leu Ser Arg Leu Leu Ile Asn Thr Lys Arg
        290                     295                     300
Lys Ser Lys Glu Phe Leu Lys Asn Gly Asn Tyr Phe Glu Gly Ile Gln
305                     310                     315                     320
Pro Gly Gln Gln Thr Glu Lys Phe Leu Gly Ser Lys Ala Arg Arg Ile
                325                     330                     335
Cys Trp Phe Gly Ser Ile Val Val Ala Ile Val Leu Ala Ile Pro Met
                340                     345                     350
Tyr Ser Ala Leu Leu Val Pro His Leu Leu Lys Glu Val Tyr Phe Thr
        355                     360                     365
```

Thr Gln Met Ile Val Phe Val Tyr Ile Gly Ile Asn Ile Ala Glu Thr
    370   375   380
Ile Arg Ala Tyr Leu Tyr Phe Asp Ser Tyr Lys Gln Ile Leu Asn Lys
385   390   395   400
Tyr Trp

<210> 5039
<211> 371
<212> PRT
<213> S.epidermidis

<400> 5039
Ile Val Glu Ile Ala Phe Phe Arg Val Tyr Asp Asn Tyr Gly Leu Lys
1   5   10   15
Ile Lys Lys Glu Gly Phe Gly Glu Met Asp Ile Ile Leu Gly Val Gly
            20   25   30
Thr Leu Val Leu Val Leu Ile Ile Met Thr Leu Phe Leu Asn Phe Ala
        35   40   45
Pro Tyr Gly Lys Gln Gly Leu Gln Ala Leu Ser Gly Ala Ala Cys Ala
        50   55   60
Thr Phe Leu Pro Gln Ala Phe Leu Ser Tyr Ala Ile Gly Gly Val Phe
65   70   75   80
His Val Lys Phe Phe Gln Glu Ile Gly Asp Leu Ala Gly Ser Leu Ser
            85   90   95
Gly Ile Ala Val Gly Ile Leu Thr Cys Leu Lys Leu Glu Val Ser Pro
        100   105   110
Val Phe Ala Val Ile Val Gly Leu Val Leu His Asp Ser Lys Leu Leu
        115   120   125
Pro Ala Phe Ile Ala Ala Tyr Val Val Ala Phe Gly Ile Lys Phe Val
    130   135   140
Glu Lys Lys Val Pro Glu Gly Leu Asp Leu Ile Val Val Ile Leu Leu
145   150   155   160
Ala Pro Ala Val Thr Phe Gly Leu Ala Asn Leu Ile Ser Pro Gly Val
            165   170   175
Ile Ala Val Leu Lys Gln Ile Gly Ser Ala Ile Thr Ser Val Gly Asp
        180   185   190
Asn Asn Pro Tyr Ala Leu Ala Val Ile Leu Gly Leu Val Ile Pro Val
    195   200   205
Thr Gly Met Thr Pro Leu Ser Ser Met Val Leu Thr Ser Leu Leu Gly
    210   215   220
Leu Thr Gly Ile Pro Met Ala Ile Gly Ala Leu Thr Cys Thr Gly Ala
225   230   235   240
Ser Phe Val Asn Gly Ile Leu Phe Ser Lys Leu Lys Ile Gly Asn Lys
            245   250   255
Gly Asn Ala Phe Ala Val Phe Val Glu Pro Leu Thr Gln Ile Asp Leu
            260   265   270
Ile Ala Lys Tyr Pro Leu Gln Leu Phe Gly Ala Asn Ala Ile Ile Gly
        275   280   285
Val Val Asn Ala Cys Ile Val Thr Tyr Ser Gly Leu Ile Ile Asp Ile
    290   295   300
Lys Gly Met Ala Thr Pro Ile Ala Gly Ala Ile Val Leu Tyr Gly Phe
305   310   315   320
Asn Asp Ala Val Arg Ser Thr Ile Thr Ile Ile Ala Val Ala Ile Ala
            325   330   335
Ser Val Ile Leu Ala Tyr Val Ile Ser Ala Ile Ile Asn Lys Phe Asn

```
                340                      345                      350
    Leu Met Asn Val Gly Phe Lys Leu Pro Arg Arg Lys Asn Gln Val Lys
            355                      360                  365
    Glu Ser Val
        370
```

<210> 5040
<211> 178
<212> PRT
<213> S.epidermidis

<400> 5040
```
    Val Gly Gly Ile Glu Val Lys Ile Val Ile Ala Asp Asp His Ala Val
    1                   5                   10                      15
    Val Arg Thr Gly Phe Ser Met Ile Leu Asn Tyr Gln Glu Asp Met Glu
                20                  25                  30
    Val Val Ala Thr Ala Ala Asp Gly Val Glu Ala Tyr Gln Lys Val Leu
                35                  40                  45
    Glu His Arg Pro Asp Val Leu Ile Leu Asp Leu Ser Met Pro Pro Gly
        50                  55                  60
    Glu Ser Gly Leu Ile Ala Thr Ser Lys Ile Ser Glu Ser Phe Pro Asp
    65                  70                  75                      80
    Thr Lys Ile Leu Ile Leu Thr Met Phe Asp Asp Glu Glu Tyr Leu Phe
                85                  90                  95
    His Val Leu Lys Ser Gly Ala Lys Gly Tyr Ile Leu Lys Asn Ser Pro
                100                 105                 110
    Asp Glu Gln Leu Ile Leu Ala Val Arg Thr Val Tyr Gln Gly Glu Thr
                115                 120                 125
    Tyr Val Asp Met Lys Leu Thr Thr Ser Leu Val Asn Glu Phe Val Asn
            130                 135                 140
    Gln Ser Gln Thr Asp Glu Val Ser Ser Ser Ser Asp Pro Phe Lys Ile
    145                 150                 155                 160
    Leu Ser Lys Arg Glu Leu Glu Ile Leu Pro Leu Ile Ala Lys Val Leu
                165                 170                 175
    Trp Gln
```

<210> 5041
<211> 152
<212> PRT
<213> S.epidermidis

<400> 5041
```
    Asn Lys Met Ile Gly Ser Glu Leu Tyr Phe Ser Leu Phe Val Gly Val
    1                   5                   10                      15
    Val Leu Ser Leu Ile Phe Ala Glu Lys Phe Gly Ile Asn Pro Ala Gly
                20                  25                  30
    Leu Val Val Pro Gly Tyr Leu Ala Leu Ile Phe Asp Gln Pro Ile Met
            35                  40                  45
    Leu Leu Ser Val Leu Ile Ile Ser Cys Leu Thr Tyr Phe Ile Val Ser
        50                  55                  60
    Asn Gly Ile Ser Lys Trp Val Ile Leu Tyr Gly Arg Arg Lys Phe Ala
    65                  70                  75                      80
    Ala Met Ile Leu Thr Gly Met Val Ile Lys Phe Ile Phe Asp Leu Leu
                85                  90                  95
    Tyr Pro Leu Thr Pro Phe Glu Met Val Glu Val Ser Gly Ile Gly Val
```

```
                  100                    105                    110
Val Ile Pro Gly Ile Ile Ala Asn Thr Ile Gln Lys Gln Gly Val Val
        115                    120                    125
Ile Thr Leu Ser Thr Thr Met Leu Leu Thr Cys Ile Thr Tyr Ile Ile
        130                    135                    140
Leu Phe Leu Tyr Ser Phe Ile Asn
145                    150
```

<210> 5042
<211> 625
<212> PRT
<213> S.epidermidis

<400> 5042

```
Leu Ile Val Ile Asp Arg Gln Ile Lys Leu Ile Lys Leu Leu Leu Asn
1               5                    10                     15
Tyr Thr Asp Thr Tyr Ile Ser Gly His Asp Ile Ala Lys Gln Leu Asn
            20                    25                     30
Val Ser Asn Arg Thr Ile Arg Asn Asp Ile Lys Thr Ile His Thr Thr
            35                    40                     45
Phe Leu Asn Glu Leu Ile Leu Ser Val Gln Ser Lys Gly Tyr Met Leu
    50                     55                     60
Asn Thr Cys Leu Tyr Thr Pro Asp Glu Ile Gln Ser Ala Leu Glu Ser
65                     70                     75                     80
Val Ile Val Lys Glu Asn Lys Leu Leu Ile Thr Ile Ala Tyr Arg Leu
            85                     90                     95
Phe Met Glu Lys His Thr Phe Thr Ile Lys Glu Leu Ser Ser Thr Tyr
            100                    105                    110
His Leu Thr Lys Ser Lys Val Ile Asp Tyr Val Thr Arg Ile Gln Thr
            115                    120                    125
Trp Ala Ile Lys Phe Asp Ile Tyr Leu Ser Ile Lys Lys Lys Gln Gly
        130                    135                    140
Ile Met Ile Asp Ala Ser Thr Thr Ser Ile Ser Asn Ala Val Leu His
145                    150                    155                    160
Ile Asn Gln Leu Thr Asp Asp Asp Phe Lys Val Glu Asn Leu Ile Leu
                165                    170                    175
Gln Glu Leu Pro Gln Ala His Thr Arg Lys Ile Lys Gln Ile Ile Ser
            180                    185                    190
Lys His Ile Asp Asn His Gln Leu Ser Thr Ser Glu Asn Lys Ile Gln
            195                    200                    205
Gln Leu Leu Val His Leu Ile Leu Ile Ile Lys His Ser Gln Pro Glu
    210                    215                    220
Glu Glu Asp Trp Ser Thr Asp Thr Glu Ser Leu Thr Ile Ala Lys Lys
225                    230                    235                    240
Cys Ile Lys Asp Ile Asn Glu Thr Leu Gly Tyr Gln Leu Asn Asn Lys
                245                    250                    255
Thr Ser Glu Cys Phe Ser Phe Phe Ile Ser Tyr His Phe Asn Lys Phe
            260                    265                    270
Asp Leu Gly Ile Gln Gln Leu Phe Ile Gln Ser Tyr Ile Asp Arg Leu
            275                    280                    285
Ile Glu Leu Met Glu Gln His Ile Gly Phe Pro Phe Ser Gln Asp Thr
    290                    295                    300
Ile Leu Lys Asp Asn Met Asn Val His Phe Ser Arg Thr Tyr Leu Arg
305                    310                    315                    320
Leu Met Ser His Val Tyr Leu Asn Asn Pro Leu Thr Ser Gln Ile Lys
                325                    330                    335
```

Arg Leu Tyr Pro Phe Val Phe Asn Thr Leu Tyr Asp Ser Ile Arg Gln
            340   345   350
Leu Ser Gln Asp Thr Asn Ile Gln Leu Ser Glu Asp Glu Ile Ala Phe
            355   360   365
Leu Thr Ile His Phe Gln Ser Ser Ile Glu Arg His Lys Ser Ser His
            370   375   380
Ile His Val Val Ile Ala Cys Tyr Tyr Gly Leu Gly Ile Ser Thr Leu
385   390   395   400
Leu Ala Glu Lys Ile Lys Gln Leu Asn His Ala Ile Gln Ile Val Asp
                405   410   415
Thr Leu Lys Leu Glu Asp Ile Asn Asn Tyr His Phe Glu Gly Ile Asp
            420   425   430
Leu Leu Ile Thr Thr His Asp Phe Asp Thr Ser Gln Leu Leu Gln Ile
            435   440   445
Pro Lys Val Ile Gln Val Ser Pro Leu Phe Ser Asp Glu Asp Ala Lys
    450   455   460
Lys Ile Glu Phe Phe Val Lys Asp Met Gln Asn Pro Leu Ser Lys Asp
465   470   475   480
Asp Ile Leu Ser Lys Ile Gln Leu Ser Val Glu Ser Asn Phe Lys Met
                485   490   495
Asn His Ser Asn His Ile Leu Pro Ile Phe Glu Lys Ser Lys Glu Ile
            500   505   510
Leu Asp Tyr His His Ala Thr Leu Asp Gly Tyr Ile Glu Ser Ala Ile
            515   520   525
Asp Arg Glu Lys Gln Ser Ser Thr Tyr Ile Gly Lys Gly Ile Ala Leu
            530   535   540
Pro His Gly Asn Pro Glu Lys Val Leu Lys Ser His Met Ile Ile Phe
545   550   555   560
Lys Pro Ser Gln Pro Ile Thr Trp Lys Gln His Glu Val Lys Leu Val
                565   570   575
Phe Phe Leu Ala Met Ser Lys Lys Asp Leu Asn Ile Asn Arg Lys Ile
                580   585   590
Ile Gln Thr Ile Ala Gln Leu Glu Glu Asp Asp Ile His Gln Leu Cys
            595   600   605
Leu Leu Asp Asp Leu Gln Leu Lys Asn Thr Leu Tyr Ala Arg Phe Lys
            610   615   620
Glu
625

<210> 5043
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5043
Lys Gly Val Ile Ile Met Thr Gln Lys Ile Ile Lys Val Glu Gly Met
1   5   10   15
Ser Cys Glu His Cys Arg Asn Ala Val Glu Ser Ala Leu Ala Lys Leu
            20   25   30
Asn Gly Val Ser Ser Ala Glu Val Asn Leu Asp Glu Asn His Val Arg
            35   40   45
Val Glu Tyr Asn Asp Ser Lys Val Thr Phe Glu Asn Met Lys Glu Ala
    50   55   60
Ile Glu Glu Gln Gly Tyr Asp Val Lys
65   70

<210> 5044
<211> 121
<212> PRT
<213> S.epidermidis

<400> 5044
```
Ile Glu Val Ile Asn Cys Met Glu Asn Phe Asp Lys Ser Tyr His Asp
1               5                   10                  15
Lys Thr Gly Asp Val Leu Gly Ala Leu Ser Tyr Leu Ser Val Phe Phe
            20                  25                  30
Ala Pro Val Leu Phe Pro Leu Ile Val Trp Ile Val Gly Gln Pro Pro
            35                  40                  45
Ala Ser Thr Tyr Ser Arg Asn Ala Leu Phe Asn His Ile Leu Ser Trp
        50                  55                  60
Val Cys Leu Val Leu Gly Leu Ile Ser Phe Ala Ala Gly Leu Ser Leu
65                  70                  75                  80
Ile Asp Ser Thr Asn Gly Val Ala Val Leu Val Ile Gly Val Ile Ile
            85                  90                  95
Gly Gly Ile Leu Leu Ile Ala Ser Leu Val Leu Phe Ile Ile Asn Ile
            100                 105                 110
Val Lys Gly Ile Lys Leu Leu Met Ile
            115                 120
```

<210> 5045
<211> 192
<212> PRT
<213> S.epidermidis

<400> 5045
```
Met Ile Ala Ile Ile Asp Tyr Gly Leu Gly Asn Ile Ser Asn Val Thr
1               5                   10                  15
Arg Ala Ile Gln His Leu Gly Tyr Asp Val Ile Leu Thr Cys Asp Asp
            20                  25                  30
Lys Asp Val Gln Lys Ala Glu Ala Ile Val Leu Pro Gly Val Gly His
            35                  40                  45
Phe Gln Asp Ala Met His Ser Ile Glu Glu Lys Ser Ile Lys Asp Met
        50                  55                  60
Leu Lys Asn Ile His Asp Lys Pro Ile Ile Gly Ile Cys Leu Gly Met
65                  70                  75                  80
Gln Leu Leu Phe Gln His Ser Ala Glu Gly Asp Val Ser Gly Leu Glu
            85                  90                  95
Leu Val Pro Gly Asn Ile Val Pro Ile Gln Ser Ser His Pro Ile Pro
            100                 105                 110
His Leu Gly Trp Asn Glu Leu Lys Ser Thr His Pro Leu Leu Gln Ser
            115                 120                 125
Asp Val Tyr Phe Val His Ser Tyr Gln Ala Glu Met Ser Glu Tyr Val
        130                 135                 140
Val Ala Tyr Ala Asp Tyr Gly Thr Lys Ile Pro Gly Val Ile Gln Tyr
145                 150                 155                 160
Arg Asn Tyr Ile Gly Ile Gln Phe His Pro Glu Lys Ser Gly Thr Tyr
            165                 170                 175
Gly Leu Glu Ile Leu Asn Gln Ala Leu Lys Gly Gly Phe Ile Asn Asp
            180                 185                 190
```

<210> 5046
<211> 167

<212> PRT
<213> S.epidermidis

<400> 5046
Gly Ile Glu Met Ile Arg Phe Ala Arg Leu Glu Asp Leu Gln Gly Ile
1   5   10   15
Leu Thr Ile Tyr Asn Asp Ala Ile Leu Asn Thr Thr Ala Val Tyr Thr
            20   25   30
Tyr Lys Pro Gln Gln Leu Asp Glu Arg Leu Gln Trp Tyr Gln Ser Lys
        35   40   45
Ala Lys Ile Asn Glu Pro Ile Trp Val Tyr Glu Lys Glu Gly Lys Val
        50   55   60
Val Gly Phe Ala Thr Tyr Gly Ser Phe Arg Gln Trp Pro Ala Tyr Leu
65   70   75   80
Tyr Thr Ile Glu His Ser Ile Tyr Val His Gln Gln Tyr Arg Gly Leu
                85   90   95
Gly Ile Ala Ser Gln Leu Leu Glu Asn Leu Ile Arg Tyr Ala Lys Glu
            100   105   110
Gln Gly Tyr Arg Thr Ile Val Ala Gly Ile Asp Ala Ser Asn Met Asp
        115   120   125
Ser Ile Ala Leu His Lys Lys Phe Asp Phe Ser His Ala Gly Thr Ile
        130   135   140
Lys Asn Val Gly Tyr Lys Phe Asp Arg Trp Leu Asp Leu Ser Phe Tyr
145   150   155   160
Gln Tyr Asp Leu Ser Asp Ser
                165

<210> 5047
<211> 134
<212> PRT
<213> S.epidermidis

<400> 5047
Leu Leu Glu Met Thr Ile Leu Ile Arg Thr Phe Met Asn Ser Lys Ile
1   5   10   15
His Arg Ala Arg Val Thr Glu Ser Asn Leu Asn Tyr Val Gly Ser Ile
            20   25   30
Thr Ile Asp Ala Asn Ile Leu Asp Ala Val Asp Ile Leu Pro Asn Glu
        35   40   45
Lys Val Ala Ile Val Asn Asn Asn Gly Ala Arg Phe Glu Thr Tyr
        50   55   60
Val Ile Ala Gly Glu Arg Gly Ser Gly Lys Met Cys Leu Asn Gly Ala
65   70   75   80
Ala Ser Arg Leu Val Glu Val Gly Asp Val Ile Ile Ile Met Thr Tyr
                85   90   95
Ala Gln Leu Asn Glu Asp Glu Met Val Asp His Ser Pro Lys Val Ala
            100   105   110
Val Leu Asn Glu Asn Asn Glu Ile Ile Glu Met Ile Asn Glu Lys Glu
        115   120   125
Asn Thr Ile Ser Asn Val
        130

<210> 5048
<211> 530
<212> PRT
<213> S.epidermidis

<400> 5048

```
Met Asn Trp Ile Ser Ile Ile Leu Phe Ile Met Val Val Gly Gly Ile
1               5                   10                  15
Ser Phe Tyr Ala Tyr Leu Gln Ser Arg Lys Ile Lys Thr Ser Ser Ser
            20                  25                  30
Asp Gly Tyr Phe Met Gly Gly Asn Ser Leu Thr Gly Phe Thr Val Ala
            35                  40                  45
Ser Thr Ile Ile Met Thr Asn Leu Ser Thr Glu Gln Ile Val Gly Gln
        50                  55                  60
Asn Gly Gln Ser Tyr Ala Gln Gly Met Glu Val Met Ala Trp Glu Val
65                  70                  75                  80
Thr Ala Ala Val Ala Val Val Leu Leu Ala Trp Val Phe Leu Pro Lys
                85                  90                  95
Tyr Leu Lys Tyr Gly Val Asn Thr Ile Ser Glu Phe Leu Glu Leu Arg
            100                 105                 110
Tyr Asp Thr Phe Thr Lys Arg Phe Val Ser Ile Leu Phe Ile Phe Thr
        115                 120                 125
Tyr Val Val Ser Phe Leu Pro Val Val Leu Tyr Ser Gly Ser Leu Val
        130                 135                 140
Phe Asn Lys Met Phe Lys Val Asp Glu Tyr Leu Gly Val Ser Ser Ser
145                 150                 155                 160
Thr Ala Val Ile Ile Ile Ser Ser Ile Ile Gly Ile Ile Gly Ile Ile
                165                 170                 175
Tyr Leu Phe Ile Gly Gly Leu Ser Leu Ser Ala Phe Ser Asp Ser Ile
            180                 185                 190
Tyr Gly Met Ala Leu Ile Ile Gly Gly Leu Ala Ile Thr Ile Leu Gly
        195                 200                 205
Leu Gly Gln Leu Gly Asp Gly Asn Phe Leu His Gly Phe Asp Lys Ile
        210                 215                 220
Val Gln Asp Thr Pro Glu Lys Leu Asn Gly Phe Gly Lys Val Asp Ser
225                 230                 235                 240
Asp Val Val Pro Trp Pro Thr Leu Phe Phe Gly Met Phe Phe Asn Asn
                245                 250                 255
Leu Phe Phe Trp Cys Ala Asn Gln Met Ile Val Gln Lys Ala Leu Ala
            260                 265                 270
Ala Lys Asn Leu Lys Glu Ser Gln Lys Gly Ala Ile Tyr Leu Ser Leu
            275                 280                 285
Phe Lys Val Phe Gly Pro Leu Ile Thr Val Leu Pro Gly Val Val Ala
        290                 295                 300
Phe Asn Tyr Phe Asn Gly Ser Ile Asp Lys Ser Asp Asn Ala Tyr Pro
305                 310                 315                 320
Ala Leu Val Thr Ser Val Leu Pro Glu Trp Ala Phe Gly Leu Phe Gly
            325                 330                 335
Ala Val Ile Phe Gly Ala Ile Leu Ser Ser Phe Val Gly Ser Leu Asn
            340                 345                 350
Ser Thr Thr Thr Leu Leu Thr Leu Asp Phe Tyr Lys Pro Ile Phe Gly
        355                 360                 365
Lys Asn Lys Ser Asp Lys His Ile Ala Arg Val Gly His Ile Ala Thr
        370                 375                 380
Val Val Ile Gly Val Ile Val Val Ala Leu Ala Pro Val Ile Ser Leu
385                 390                 395                 400
Phe Pro Ser Gly Leu Tyr Ala Val Val Gln Gln Phe Asn Gly Val Tyr
            405                 410                 415
Ser Met Pro Val Leu Ala Leu Ile Leu Val Ala Phe Phe Ser Lys Arg
        420                 425                 430
```

```
Thr Ser Lys Leu Gly Ala Lys Val Thr Leu Phe Thr His Ile Ile Leu
        435                 440                 445
Tyr Ala Ile Ile Ser Phe Val Phe Thr Glu Ile Asn Tyr Leu Tyr Thr
        450                 455                 460
Phe Ser Val Leu Phe Phe Val Asp Leu Ile Ile Ile Leu Ile Phe Asn
465                 470                 475                 480
Lys Val Lys Pro Ser Ser Glu Phe Asp Leu Ser Thr His Gln Pro Lys
                485                 490                 495
Val Asp Met Thr Pro Trp Lys Tyr Arg Tyr Val Ala Gly Ile Ile Val
            500                 505                 510
Leu Ala Leu Val Val Val Ser Tyr Ile Ile Phe Ser Pro Leu Val Leu
            515                 520                ·525
Ala Lys
    530


<210> 5049
<211> 533
<212> PRT
<213> S.epidermidis


<400> 5049
Asp Ile Val Phe Asn Leu Tyr Ile Ile Lys Leu Cys Leu Phe Pro Val
1                   5                   10                  15
Leu Glu Glu Val Asn Ser Met Ser Gln Ile Ala Phe Tyr Ile Leu Ser
            20                  25                  30
Asp Val His Gly Phe Ile Phe Pro Thr Asp Phe Ser Ser Arg Glu Lys
        35                  40                  45
Asp Leu Pro Met Gly Leu Leu Lys Ala Asn His Leu Ile Glu Gln Asp
    50                  55                  60
Cys Val His Tyr Asp Gly Ser Val Lys Ile Asp Asn Gly Asp Phe Leu
65                  70                  75                  80
Gln Gly Ser Pro Leu Cys Asn Tyr Leu Val Ser Lys Leu Lys Ser Ser
                85                  90                  95
Leu Pro Leu Thr Ser Ile Tyr Asn Arg Leu Gly Phe Asp Phe Gly Thr
            100                 105                 110
Val Gly Asn His Glu Phe Asn Tyr Asp Leu Pro Tyr Leu Lys Gln Ala
        115                 120                 125
Ile Asn Gln Leu His Tyr Pro Val Leu Cys Ala Asn Ile Ile Glu Asn
    130                 135                 140
Thr Gln Pro Phe Thr Gly Gln Gly Ile His Tyr Phe Lys Val Asn Gly
145                 150                 155                 160
Leu Thr Ile Gly Thr Ile Gly Leu Thr Thr Gln Tyr Ile Pro His Trp
                165                 170                 175
Glu Gln Pro Asp Tyr Ile Lys Thr Leu Asn Phe Asn Ser Ala Ile His
            180                 185                 190
Thr Leu Lys Ser Glu Leu Pro Thr Leu Arg Glu Lys Ser Asp Ile Val
        195                 200                 205
Val Val Ser Tyr His Gly Gly Phe Glu Arg Asp Leu Asp Ser Gly Leu
    210                 215                 220
Pro Thr Glu Ala Leu Thr Gly Glu Asn Glu Gly Tyr Asp Ile Leu Arg
225                 230                 235                 240
Gln Phe Ser Asp Ser Ile Asp Val Leu Ile Thr Gly His Gln His Arg
                245                 250                 255
Asp Ile Ala Thr Ile Lys Asn Gln Thr Ala Ile Ile Gln Pro Gly Ser
        260                 265                 270
Lys Gly Thr Lys Val Gly Lys Ile Val Ile Glu Tyr Thr His Asp Lys
```

```
                275                      280                      285
    Lys Val Leu Ile Lys Glu Cys Asn Leu Met Asn Val His Asn Ser Thr
        290                      295                      300
    Ser Phe Lys Pro Asn Asp Glu Asp Ile Ala Leu Arg Asn Gln Leu Glu
    305                      310                      315                      320
    Asp Trp Leu Asp Thr Gln Ile Ala Glu Leu Pro Tyr Ala Met Arg Ile
                325                      330                      335
    Asn Asn Ser Phe Glu Ala Arg Lys Ser Pro His Ala Phe Val Asn Leu
                340                      345                      350
    Leu Asn Tyr Ile Leu Leu Glu Lys Ser Gly Ala Asp Ile Ala Cys Thr
                355                      360                      365
    Ala Leu Phe Asp Ser Ala Asn Gly Phe Asp Glu Lys Val Thr Met Arg
        370                      375                      380
    Asp Ile Ile Asn Asn Tyr Pro Phe Pro Asn Thr Phe Lys Val Ile Glu
    385                      390                      395                      400
    Leu Ser Gly Lys Asp Ile Lys Leu Ala Ile Glu Arg Ser Ala Ser Tyr
                405                      410                      415
    Phe Asp Ile Val Asn His Lys Ile Thr Val Asn Lys Glu Phe Leu Glu
                420                      425                      430
    Pro Lys Pro Gln His Phe Asn Tyr Asp Ile Phe Ala Gly Ile Gln Tyr
                435                      440                      445
    Thr Ile His Val Ser His Pro Tyr Gly Glu Arg Val Ser Asp Leu Leu
        450                      455                      460
    Ile Asn Asp Ala Pro Leu Gln Ser Asp Gln Ile Tyr Thr Ile Cys Val
    465                      470                      475                      480
    Asn Asn Tyr Arg Ala Val Gly Gly Gly Asn Tyr Asp Met Tyr Val Asn
                485                      490                      495
    Lys Pro Val Ile Lys Asp Ile Gln Ile Glu Gly Ala Gln Leu Leu Ile
                500                      505                      510
    Asp Tyr Leu Ser His Asn Asp Leu Ser Gln Ile Pro Gln Val Ile Asp
                515                      520                      525
    Phe Asn Val Val Lys
        530
```

<210> 5050
<211> 502
<212> PRT
<213> S.epidermidis

<400> 5050

```
    Lys Val Gly Ile Lys Thr Met Ile Tyr Thr Val Thr Ser Thr Leu Pro
    1                   5                   10                  15
    Leu Val His Gly Gly Arg Thr Lys Ser Leu Leu Thr Arg Ile Arg Phe
                20                      25                      30
    Leu Asp Lys Glu Met Gly Ile His Asn Lys Ile Leu Thr Thr Asn Tyr
                35                      40                      45
    Asn Ala Asn Tyr Asn Glu Val Tyr Gln Lys Phe Glu Glu Asn Gln Leu
        50                       55                      60
    Ile Thr Lys Asn Thr Gln Ile Glu Asn Ile Tyr Asp Trp Leu Ser Asp
    65                      70                       75                      80
    Phe Lys Leu Leu Ser Ile Pro Lys Ser Arg Phe Lys Lys Lys Thr Leu
                85                      90                       95
    Tyr Ser Glu Lys Asp Arg Asp Ile Glu Gly Leu Thr Ser Lys Ala Phe
                100                     105                     110
    Asn Asp Gly Asn Val Met Arg Tyr Tyr Asp Gln Glu Thr Tyr Val Leu
                115                     120                     125
```

```
Tyr Arg Lys Phe Tyr Glu Asp Thr Asn Ile Ile Glu Phe Glu Asp Val
    130                 135                 140
Met Ser Pro Ile Ser Lys Lys Lys Ile Glu Arg Arg Glu Tyr Asn His
145                 150                 155                 160
Phe Gly Gln Leu His Arg Lys Ile Tyr Phe Ser Ser Arg Thr Tyr His
                165                 170                 175
Lys Ile Leu Glu Glu Tyr Phe Asp Thr Glu Gly Ser Ile Tyr Cys Lys
                180                 185                 190
Lys Phe Phe Asn Ser Gln Lys Ala Asn Glu Leu Asp Phe Ile Gln Ile
            195                 200                 205
Phe Lys Asn Gln Arg Ile Met Lys Ala Phe Lys Asn Glu Lys Asp Leu
    210                 215                 220
Phe Lys Tyr Tyr Phe Glu His Arg Phe Lys Gln Asn Asp Ile Val Phe
225                 230                 235                 240
Asn Asp Ala Arg Leu Leu Asp Lys Pro Leu Leu Asn Asn Cys Met Asn
                245                 250                 255
Thr Lys Asn Val Leu Val Phe His Asn Ser His Ile Asp Gly Asp Asn
                260                 265                 270
Ile Lys Ser Ser Tyr Lys Ile Ala Leu Glu Asn Ser Asp Lys Val Ala
            275                 280                 285
Gln Tyr Leu Leu Leu Thr His Met Gln Lys Asp Asp Ile Gln His Ala
    290                 295                 300
Tyr Gly Ile Ser Asp Glu Lys Ile Ser Ile Val Pro His Phe Ile Lys
305                 310                 315                 320
Ser Tyr Gly Gln Lys Asp Thr His His Lys Glu Asp Arg Phe Val Phe
                325                 330                 335
Ile Gly Arg Leu Gly Lys Gln Lys Gln Val Asp His Leu Ile Lys Ser
                340                 345                 350
Tyr Asn Gln Phe Leu Lys Asn Gly His Gln Thr Lys Leu Ala Ile Tyr
            355                 360                 365
Gly Ala Asp Glu Gln Asn Gln Lys Gln Val Ile Leu Asp Leu Val Lys
    370                 375                 380
Glu Tyr Gln Ile Glu Asp Lys Val Asp Leu Asn Asp Phe Thr Lys His
385                 390                 395                 400
Pro Leu Glu Glu Phe Lys Lys Ser Lys Ala Ser Leu Leu Thr Ser Glu
                405                 410                 415
Tyr Glu Gly Phe Gly Leu Thr Val Met Glu Ser Ile Glu Val Gly Cys
                420                 425                 430
Pro Val Ile Ser Tyr Asp Val Arg Tyr Gly Pro Gly Glu Ile Ile Glu
                435                 440                 445
His Gly Glu Asn Gly Tyr Leu Val Glu Pro Asp Asn Ile Glu Ala Phe
    450                 455                 460
Ala Ala Tyr Met Asp Lys Ile Ile Lys Asn Pro Leu Lys His Val Lys
465                 470                 475                 480
Thr Lys Glu Thr Leu Lys Tyr Glu Gln Ala Lys Asn Asn Tyr Gln Lys
                485                 490                 495
Leu Phe Glu Arg Val Lys
                500
```

```
<210> 5051
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5051
Thr Ala Val Phe Val Ser Thr Ile Pro Thr Lys Ile Met Ile Val Lys
```

```
1                   5                   10                  15
Pro Met Ile Asp Thr Ala Pro Ile Val Ile Gly Trp Val Ile Gln Ala
            20                  25                  30
Met Met Val Asp Thr Lys Ile Ala Asn Ile Asn Gln Ala
        35                  40                  45
```

<210> 5052
<211> 263
<212> PRT
<213> S.epidermidis

<400> 5052
```
Gly Val Val Leu Leu Ser Asn Ser Lys Lys Val Ala Val Val Thr Gly
1                   5                   10                  15
Ala Ala Gln Gly Ile Gly Leu Lys Ile Ala Glu Arg Leu Phe Glu Asp
            20                  25                  30
Gly Tyr Ser Ile Ala Leu Val Asp Phe Asn Glu Ala Val Ala Lys Glu
        35                  40                  45
Ser Ala Glu Lys Leu Ser Lys Glu Gly Gln Glu Ala Val Ala Phe Lys
    50                  55                  60
Ala Asp Val Ser Asn Arg Asp Gln Val Phe Ser Val Leu Asn Gln Val
65                  70                  75                  80
Val Glu His Phe Gly Asp Leu Asn Val Leu Val Asn Asn Ala Gly Leu
                85                  90                  95
Gly Pro Met Thr Pro Ile Glu Ser Val Thr Pro Glu Gln Phe Asn Gln
            100                 105                 110
Val Val Gly Val Asn Val Gly Gly Val Phe Trp Gly Ile Gln Ala Ala
         115                 120                 125
Ile Glu Gln Phe Asp Lys Leu Gly His Gly Gly Lys Ile Ile Asn Ala
        130                 135                 140
Thr Ser Gln Ala Gly Val Glu Gly Asn Ala Gly Leu Ser Leu Tyr Ser
145                 150                 155                 160
Ser Thr Lys Phe Ala Val Arg Gly Leu Thr Gln Val Ala Ala Arg Asp
            165                 170                 175
Leu Ala Glu Lys Asn Ile Thr Val Asn Ala Phe Ala Pro Gly Ile Val
            180                 185                 190
Glu Thr Pro Met Met Lys Gly Ile Ala Glu Lys Leu Ala Glu Glu Asn
            195                 200                 205
Asn Gln Pro Met Glu Trp Gly Trp Lys Gln Phe Thr Asp Gln Ile Ala
        210                 215                 220
Leu Lys Arg Leu Ser Lys Pro Glu Asp Val Ala Asn Val Val Ser Phe
225                 230                 235                 240
Leu Ala Gly Ser Asp Ser Asp Tyr Ile Thr Gly Gln Thr Ile Ile Val
            245                 250                 255
Asp Gly Gly Met Arg Phe His
            260
```

<210> 5053
<211> 58
<212> PRT
<213> S.epidermidis

<400> 5053
```
Asn Phe Asn Phe Ile Asn Val Ile Thr Thr Ser Ile Leu Gln Cys Ile
1                   5                   10                  15
Ser Cys Ile Tyr Ile Asn Thr Ile Thr Ile Leu Ile Tyr Asn Ser Leu
```

```
            20                    25                    30
Leu Lys Ser Ser Leu Ile Phe Asn Tyr Tyr Asn Lys His Asn Gly Ser
        35                    40                    45
Val Met Thr Ser Cys Leu Asp Val Lys Arg
     50                    55
```

<210> 5054
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5054
```
Asn Glu Phe Val Ile Gly Thr Leu Phe Ile Ile Leu Phe Tyr Ile Ile
1               5                    10                    15
Asn Phe Asp Leu Leu Leu Ser Ser His Lys Val Pro Ile His Leu Ile
             20                    25                    30
Ile Lys Ser Asp Glu Gly Glu Leu Lys
        35                    40
```

<210> 5055
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5055
```
Leu Val Ile Val Ser Leu Leu Asp Ile Ile Ile Lys Ser Pro Phe Pro
1               5                    10                    15
Ile Asn Tyr Ile Cys Leu Leu Gly Phe Ser Tyr Lys Lys Lys Thr Ile
             20                    25                    30
Ser Cys Phe Glu Arg Leu Glu Lys Gln Ala Lys
        35                    40
```

<210> 5056
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5056
```
Ile Thr Val Val Asn Tyr Ile Phe Asn Leu Lys Lys Tyr Val Ile Gln
1               5                    10                    15
Ile Leu Leu Lys Ser Arg Ile Cys Tyr Ile Leu Val Thr Lys Ile Ile
             20                    25                    30
Phe Leu Lys Ile His Leu Thr Val Asn Ile Leu Gly Leu
        35                    40                    45
```

<210> 5057
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5057
```
Val Leu Val Val Val Arg Val Leu Phe Thr Val Val Asp Phe Phe Ala
1               5                    10                    15
Ile Val Val Phe Leu Val Asp Asp Val Leu Gly Asp Ile Ala Cys Leu
             20                    25                    30
Val Asp Val Ala Leu Phe Ile Asp Val Ala Leu Asp Leu Thr Asp Val
```

```
            35                      40                      45
Ser Leu Thr Glu Arg Leu Lys Leu Asp Val Val Phe
    50                  55                  60
```

<210> 5058
<211> 1259
<212> PRT
<213> S.epidermidis

<400> 5058

```
Tyr Asn Asp Phe Val Lys Lys Cys Thr Ile Lys Ile Arg His Asn Thr
1               5                   10                  15
Tyr Ala Leu Arg Lys Asp Ile Thr Leu Tyr Gly Gly Arg Ile Asn Lys
            20                  25                  30
Met Gly Lys Phe Gly Leu Asn Phe Phe Lys Pro Thr Glu Lys Phe Asn
            35                  40                  45
Gly Asn Trp Ser Val Leu Glu His Lys Ser Arg Glu Trp Glu Lys Met
    50                  55                  60
Tyr Arg Glu Arg Trp Ser His Asp Lys Val Val Arg Thr Thr His Gly
65                  70                  75                  80
Val Asn Cys Thr Gly Ser Cys Ser Trp Lys Val Phe Val Lys Asn Gly
                85                  90                  95
Val Ile Thr Trp Glu Asn Gln Gln Ile Asp Tyr Pro Ser Cys Gly Pro
            100                 105                 110
Asp Met Pro Glu Phe Glu Pro Arg Gly Cys Pro Arg Gly Ala Ser Phe
            115                 120                 125
Ser Trp Tyr Glu Tyr Ser Pro Leu Arg Val Lys Tyr Pro Tyr Ile Arg
    130                 135                 140
Gly Lys Leu Leu Asp Leu Trp Thr Glu Ala Leu Glu Glu Gln Asn Gly
145                 150                 155                 160
Asn Arg Ile Ala Ala Trp Ala Ser Ile Val Glu Asn Glu Glu Lys Ala
                165                 170                 175
Lys Gln Tyr Lys Glu Ala Arg Gly Lys Gly Gly His Val Arg Ala Asn
            180                 185                 190
Trp Lys Asp Val Thr Asp Ile Ile Ala Ala Gln Ile Leu Tyr Thr Ile
            195                 200                 205
Lys Lys Asp Gly Pro Asp Arg Ile Ala Gly Phe Thr Pro Ile Pro Ala
    210                 215                 220
Met Ser Met Ile Ser Tyr Ala Ser Gly Ala Arg Phe Ile Asn Leu Leu
225                 230                 235                 240
Gly Gly Glu Met Leu Ser Phe Tyr Asp Trp Tyr Ala Asp Leu Pro Pro
                245                 250                 255
Ala Ser Pro Gln Ile Trp Gly Glu Gln Thr Asp Val Pro Glu Ser Ser
            260                 265                 270
Asp Trp Tyr Asn Ala Ser Tyr Ile Met Met Trp Gly Ser Asn Val Pro
            275                 280                 285
Leu Thr Arg Thr Pro Asp Ala His Phe Met Thr Glu Val Arg Tyr Lys
    290                 295                 300
Gly Ala Lys Val Ile Ser Val Ala Pro Asp Tyr Ala Glu Asn Val Lys
305                 310                 315                 320
Phe Ala Asp His Trp Leu Ala Pro His Pro Gly Thr Asp Ala Ala Val
                325                 330                 335
Ala Gln Ala Met Thr His Val Ile Leu Gln Glu Tyr Tyr Glu Asn Gln
            340                 345                 350
Pro Asn Asp Met Phe Ile Asn Tyr Ala Lys Gln Tyr Ser Asp Met Pro
            355                 360                 365
```

```
Phe Val Ile Met Leu Asp Glu Asp Glu Asn Gly Tyr Lys Ala Gly Arg
    370             375             380
Phe Leu Arg Ala Ser Asp Leu Gly Met Ser Gly Glu Asn Asn Glu Trp
385             390             395             400
Lys Pro Val Ile Gln Asp Lys Leu Ser Gln Gln Leu Leu Val Pro Asn
            405             410             415
Gly Thr Met Gly Gln Arg Trp Glu Glu Gly Lys Lys Trp Asn Leu Lys
            420             425             430
Leu Glu Thr Glu Asp Gly Thr Pro Ile Asp Pro Met Leu Ser Met Val
        435             440             445
Glu Ser Asp Tyr His Val Glu Thr Ile Gln Phe Pro Tyr Phe Asp Ser
    450             455             460
Ser Gly Asp Gly Ile Phe Glu Arg Pro Ile Ala Thr Arg Thr Ile Gln
465             470             475             480
Leu Ala Asn Gly Glu Glu Val Lys Ile Ala Thr Val Tyr Asp Leu Met
            485             490             495
Thr Ser Gln Tyr Gly Val Gln Arg Phe Glu His Glu Leu Glu Ala Thr
        500             505             510
Ser Tyr Asp Asp Ala Ser Ser Lys Tyr Thr Pro Ala Trp Gln Glu Gln
    515             520             525
Ile Thr Gly Ile Lys Lys Glu Leu Val Thr Lys Val Ala Lys Glu Phe
    530             535             540
Ala Gln Asn Ala Ile Asp Thr Gly Gly Arg Ser Met Ile Ile Met Gly
545             550             555             560
Ala Gly Ile Asn His Trp Phe Asn Ser Asp Thr Ile Tyr Arg Ser Ile
            565             570             575
Leu Asn Leu Val Leu Leu Cys Gly Cys Gln Gly Val Asn Gly Gly Gly
        580             585             590
Trp Ala His Tyr Val Gly Gln Glu Lys Cys Arg Pro Ile Glu Gly Trp
        595             600             605
Asn Thr Ile Ala Phe Ala Lys Asp Trp Gln Gly Pro Pro Arg Leu Gln
    610             615             620
Asn Gly Thr Ser Trp Phe Tyr Phe Ala Thr Asp Gln Trp Lys Tyr Glu
625             630             635             640
Glu Ser Asn Val Asp Lys Leu Lys Ser Pro Leu Ala Glu Asn Ile Lys
            645             650             655
His Gln His Pro Ala Asp Tyr Asn Val Thr Ala Ala Arg Met Gly Trp
            660             665             670
Leu Pro Ser Tyr Pro Gln Phe Asn Lys Asn Ser Leu Leu Phe Gly Glu
        675             680             685
Glu Ala Lys Asp Glu Gly Asp Asp Ser Asn Glu Ala Ile Leu Gln Lys
        690             695             700
Ala Ile Glu Ser Val Lys Asn Lys Asp Thr Gln Phe Ala Ile Glu Asp
705             710             715             720
Pro Asp Leu Arg Lys Asn His Pro Lys Thr Leu Phe Val Trp Arg Ser
            725             730             735
Asn Leu Ile Ser Ser Ser Ala Lys Gly Gln Glu Tyr Phe Met Lys His
            740             745             750
Leu Leu Gly Ala Arg Ser Gly Leu Met Ala Glu Pro Asn Glu Asp Asp
        755             760             765
Lys Pro Glu Glu Ile Lys Trp Arg Glu Asp Thr Glu Gly Lys Leu Asp
    770             775             780
Leu Leu Val Ser Leu Asp Phe Arg Met Thr Ala Thr Pro Leu Tyr Ser
785             790             795             800
Asp Ile Val Leu Pro Ala Ala Thr Trp Tyr Glu Lys His Asp Leu Ser
            805             810             815
```

```
Ser Thr Asp Met His Pro Phe Ile His Pro Phe Asn Pro Ala Ile Asp
        820             825             830
Pro Leu Trp Glu Ser Arg Ser Asp Trp Asp Ile Tyr Lys Thr Leu Ser
        835             840             845
Lys Ala Val Ser Glu Met Ala Lys Asp Tyr Leu Pro Gly Lys Phe Lys
    850             855             860
Asp Val Val Thr Thr Pro Leu Gly His Asp Ser Lys Gln Glu Ile Ser
865             870             875             880
Thr Glu Tyr Gly Ile Val Lys Asp Trp Ser Lys Gly Glu Ile Glu Gly
            885             890             895
Val Pro Gly Lys Thr Met Pro Asn Phe Ser Ile Val Glu Arg Asp Tyr
        900             905             910
Thr Gln Ile Tyr Asp Lys Phe Val Thr Val Gly Pro Lys Leu Glu Lys
        915             920             925
Gly Lys Ile Gly Ala His Gly Val Ser Tyr Ser Val Ser Glu Glu Tyr
    930             935             940
Glu Glu Leu Lys Ser Met Val Gly Thr Trp Asn Asp Asp Asn Thr Thr
945             950             955             960
Ser Val Lys Asn Asp Arg Pro Arg Ile Asp Thr Ala Arg Lys Val Ala
            965             970             975
Asp Val Ile Leu Asn Ile Ser Ser Ala Thr Asn Gly Lys Leu Ser Gln
            980             985             990
Lys Ser Tyr Glu Asp Leu Glu Asn Gln Thr Gly Met Glu Leu Lys Asp
        995             1000            1005
Ile Ser Lys Glu Arg Ala Ser Glu Lys Ile Ser Phe Leu Asn Ile Thr
    1010            1015            1020
Ser Gln Pro Arg Glu Val Ile Pro Thr Ala Val Phe Pro Gly Ser Asn
1025            1030            1035            1040
Lys Asp Gly Arg Arg Tyr Ser Pro Phe Thr Thr Asn Val Glu Arg Leu
            1045            1050            1055
Val Pro Phe Arg Thr Leu Thr Gly Arg Gln Ser Tyr Tyr Ile Asp His
            1060            1065            1070
Glu Val Phe Gln Gln Phe Gly Glu Ser Leu Pro Val Tyr Lys Pro Thr
        1075            1080            1085
Leu Pro Pro Met Val Phe Gly Ala Arg Asp Lys Lys Val Lys Gly Gly
  ' 1090            1095            1100
Gln Asp Thr Leu Val Leu Arg Tyr Leu Thr Pro His Gly Lys Trp Asn
1105            1110            1115            1120
Ile His Ser Thr Tyr Gln Asp Asn Glu Arg Met Leu Thr Leu Phe Arg
            1125            1130            1135
Gly Gly Pro Val Val Trp Ile Ser Asn Glu Asp Ala Ala Asp His Gly
        1140            1145            1150
Ile Asn Asp Asn Asp Trp Leu Glu Val Tyr Asn Arg Asn Gly Val Val
        1155            1160            1165
Thr Ala Arg Ala Val Thr Ser His Arg Met Pro Arg Gly Thr Met Phe
    1170            1175            1180
Met Tyr His Ala Gln Asp Lys His Ile Glu Thr Pro Gly Ser Glu Ile
1185            1190            1195            1200
Thr Asp Thr Arg Gly Gly Ser His Asn Ala Pro Thr Arg Ile His Leu
            1205            1210            1215
Lys Pro Thr Gln Leu Val Gly Gly Tyr Ala Gln Ile Ser Tyr His Phe
        1220            1225            1230
Asn Tyr Tyr Gly Pro Ile Gly Asn Gln Arg Asp Glu Tyr Val Ala Val
        1235            1240            1245
Arg Lys Met Lys Glu Val Asn Trp Leu Glu Asp
    1250            1255
```

<210> 5059
<211> 167
<212> PRT
<213> S.epidermidis

<400> 5059
Leu Pro Pro Val Pro Phe Ile Leu Leu Met Ser Asn Pro Leu Ser Ser
1   5   10   15
Ala Ile Leu Arg Ala Arg Gly Glu Ile Lys Ile Leu Ser Arg Ala Ala
            20   25   30
Leu Leu Gly Glu Leu Ser Leu Leu Ser Glu Asp Gly Cys Asp Val Ser
            35   40   45
Leu Thr Ser Cys Val Ser Phe Ser Cys Ser Leu Ser Ser Phe Thr Phe
        50   55   60
Ser Asp Ala Lys Ser Ser Ser Ser Leu Ser Ile Ala Ser Pro Ser Ser
65   70   75   80
Pro Ile Ile Pro Asn Thr Ala Leu Thr Ser Ala Ser Ser Pro Ala Cys
                85   90   95
Thr Leu Ile Ser Asn Asn Val Pro Leu Ala Gly Ala Ser Thr Ser Leu
                100   105   110
Val Asn Phe Ser Glu Leu Ile Val Thr Ile Leu Ser Pro Cys Phe Thr
            115   120   125
Val Ser Pro Ser Asp Leu Asn His Ser Ser Thr Val Pro Ser Phe Ile
        130   135   140
Val Ile Pro Ser Phe Gly Ile Ile Ile Phe Ser Leu Ile Val Ile His
145   150   155   160
Leu Leu Cys Val Ser Leu Phe
                165

<210> 5060
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5060
His Tyr Ala Val Pro His Phe Thr Thr Phe Ser Arg Lys Ser Asn Ser
1   5   10   15
His Ile Ile Leu Phe Leu Met Tyr Lys Ser His Asn Ile His Asn Phe
            20   25   30
Ile Leu Ile Thr Lys His Leu Pro Met Phe Tyr Glu
        35   40

<210> 5061
<211> 234
<212> PRT
<213> S.epidermidis

<400> 5061
Met Thr Asn Val Leu Tyr Gln His Gly Thr Leu Gly Thr Leu Met Ala
1   5   10   15
Gly Leu Leu Glu Gly Thr Ala Ser Ile Asn Asp Leu Leu Glu His Gly
            20   25   30
Asp Leu Gly Ile Ala Thr Leu Thr Gly Ser Asp Gly Glu Val Ile Phe
            35   40   45
Val Asp Gly Lys Ala Tyr His Ala Asn Glu His Lys Glu Phe Ile Glu

```
            50                      55                      60
Leu Thr Gly Asp Glu Met Thr Pro Tyr Ala Thr Val Thr Lys Phe Lys
65                      70                      75                      80
Ala Asp Ser Ser Phe Lys Thr Ser Asn Lys Asn Gln Glu Glu Val Phe
                    85                      90                      95
Asp Glu Val Lys Lys Gln Met Lys Ser Glu Asn Met Phe Ser Ala Val
                    100                     105                     110
Lys Ile Ser Gly Thr Phe Lys Lys Met His Val Arg Met Met Pro Gly
                    115                     120                     125
Gln Glu Pro Pro Tyr Thr Arg Leu Ile Asp Ser Ala Arg Arg Gln Pro
                    130                     135                     140
Glu Glu Thr Arg Glu Asn Ile Lys Gly Ser Ile Val Gly Phe Phe Thr
145                     150                     155                     160
Pro Glu Leu Phe His Gly Ile Gly Ser Ala Gly Phe His Ile His Phe
                    165                     170                     175
Ala Asn Asp Asp Arg Asp Phe Gly Gly His Ile Leu Asp Phe Glu Val
                    180                     185                     190
Asp Asp Val Thr Val Glu Ile Gln Asn Phe Glu Thr Phe Glu Gln His
                    195                     200                     205
Phe Pro Val Asp Ala Lys Ser Phe Thr Asp Ala Asp Ile Asp Tyr Lys
                    210                     215                     220
Asp Ile Ala Asp Glu Ile Arg Glu Ala Glu
225                     230


<210> 5062
<211> 590
<212> PRT
<213> S.epidermidis                                    •


<400> 5062
Glu Arg Asp Val Asn Lys Gln Arg Lys Gln Ile Asn Phe Trp Arg Ser
1                   5                       10                      15
Leu Thr Met Arg Arg Lys Arg Asp Ser Tyr Asp Tyr Val Ile Ile Gly
                    20                      25                      30
Gly Gly Ser Ala Gly Ser Val Leu Gly Ala Arg Leu Ser Glu Asp Lys
                    35                      40                      45
Asp Lys Asn Val Leu Val Leu Glu Ala Gly Arg Ser Asp Tyr Phe Trp
                    50                      55                      60
Asp Leu Phe Ile Gln Met Pro Ala Ala Leu Met Phe Pro Ser Gly Asn
65                      70                      75                      80
Arg Phe Tyr Asp Trp Glu Tyr Gln Thr Asp Glu Glu Pro His Met Gly
                    85                      90                      95
Arg Arg Val Asp His Ala Arg Gly Lys Val Leu Gly Gly Ser Ser Ser
                    100                     105                     110
Ile Asn Gly Met Ile Tyr Gln Arg Gly Asn Pro Met Asp Tyr Glu Gly
                    115                     120                     125
Trp Ala Glu Pro Glu Gly Met Asp Thr Trp Asp Phe Ala His Cys Leu
                    130                     135                     140
Pro Tyr Phe Lys Lys Leu Glu Thr Thr Tyr Gly Ala Ala Pro Tyr Asp
145                     150                     155                     160
Lys Val Arg Gly His Asp Gly Pro Ile Lys Leu Lys Arg Gly Pro Ala
                    165                     170                     175
Thr Asn Pro Leu Phe Lys Ser Phe Phe Asn Ala Gly Val Glu Ala Gly
                    180                     185                     190
Tyr His Lys Thr Ala Asp Val Asn Gly Tyr Arg Gln Glu Gly Phe Gly
                    195                     200                     205
```

```
Pro Phe Asp Ser Gln Val His His Gly Arg Arg Met Ser Ala Ser Arg
    210                 215                 220
Ala Tyr Leu Arg Pro Ala Leu Arg Arg Arg Asn Leu Asp Val Glu Thr
225             230                 235                 240
Arg Ala Phe Val Thr Lys Leu Ile Phe Asp Glu Asn Asn Ser Lys Lys
            245                 250                 255
Val Thr Gly Val Thr Phe Lys Lys Asn Gly Lys Glu His Thr Val His
            260                 265                 270
Ala Asn Glu Val Ile Leu Ser Gly Gly Ala Phe Asn Thr Pro Gln Leu
    275                 280                 285
Leu Gln Leu Ser Gly Ile Gly Asp Ser Glu Phe Leu Lys Ser Lys Gly
    290                 295                 300
Ile Glu Pro Arg Met His Leu Pro Gly Val Gly Glu Asn Phe Glu Asp
305                 310                 315                 320
His Leu Glu Val Tyr Ile Gln His Lys Cys Lys Gln Pro Val Ser Leu
            325                 330                 335
Gln Pro Ser Leu Asp Val Lys Arg Met Pro Phe Ile Gly Leu Gln Trp
            340                 345                 350
Ile Phe Ala Arg Lys Gly Ala Ala Ala Ser Asn His Phe Glu Gly Gly
            355                 360                 365
Gly Phe Val Arg Ser Asn Asp Asp Val Asp Tyr Pro Asn Leu Met Phe
    370                 375                 380
His Phe Leu Pro Ile Ala Val Arg Tyr Asp Gly Gln Lys Ala Pro Val
385                 390                 395                 400
Ala His Gly Tyr Gln Val His Val Gly Pro Met Tyr Ser Asn Ser Arg
            405                 410                 415
Gly Ser Leu Lys Ile Lys Ser Lys Asp Pro Phe Glu Lys Pro Ser Ile
            420                 425                 430
Val Phe Asn Tyr Leu Ser Thr Lys Glu Asp Glu Arg Glu Trp Val Glu
            435                 440                 445
Ala Ile Arg Val Ala Arg Asn Ile Leu Lys Gln Lys Ala Met Asp Pro
    450                 455                 460
Phe Asn Gly Gly Glu Ile Ser Pro Gly Pro Gln Val Gln Thr Asp Glu
465                 470                 475                 480
Glu Ile Leu Asp Trp Val Arg Lys Asp Gly Glu Thr Ala Leu His Pro
            485                 490                 495
Ser Cys Ser Ala Lys Met Gly Pro Ala Ser Asp Pro Met Ala Val Val
            500                 505                 510
Asp Pro Leu Thr Met Lys Val His Gly Met Glu Asn Leu Arg Val Val
            515                 520                 525
Asp Ala Ser Ala Met Pro Arg Thr Thr Asn Gly Asn Ile His Ala Pro
    530                 535                 540
Val Leu Met Leu Ala Glu Lys Ala Ala Asp Ile Ile Arg Gly Arg Lys
545                 550                 555                 560
Pro Leu Glu Pro Gln Tyr Val Asp Tyr Tyr Lys His Gly Ile Asp Asp
            565                 570                 575
Glu Lys Ala Gly Ala Met Glu Asp Asp Pro Phe Tyr Gln Tyr
    580                 585                 590
```

<210> 5063
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5063
Glu Ala Cys Val Asn Ile Val Ser Phe Leu Leu Cys Ala Ile Ser Arg

```
1                5                          10                       15
Val Val Ile Glu Ile Ile Asp Lys Ile Val Ile Lys Lys Met Thr Thr
                 20                         25                       30
Met Thr Asn Ser Phe Ile Phe Ile Glu His Pro Leu Leu
             35                         40                       45
```

<210> 5064
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5064
```
Ser Lys Cys Val Asn Ser Leu Phe Asn His Lys Glu Phe Lys Ile Asn
1                5                          10                       15
Leu Ser Val His Ser Ile Thr Ile Lys Ile Arg Lys Glu Pro Val Pro
                 20                         25                       30
Met Ile Asp Val Ser Gly Ser Ile Leu Ser Thr
             35                         40
```

<210> 5065
<211> 153
<212> PRT
<213> S.epidermidis

<400> 5065
```
Gly Glu Ser Val Glu Pro Glu Ser Leu Lys His Asn Gln His Leu Gln
1                5                          10                       15
Met Asn Leu Asp Lys Leu Arg Ala Gln Glu Gly Tyr Asp Phe Gly Gly
                 20                         25                       30
Ile Ala Leu Tyr Asp Tyr His His Thr Ser Ser Pro Ile Lys Trp Gln
             35                         40                       45
Tyr Val Ser Gly Asn Thr Asn Asp Arg Tyr Lys Leu Ile Ile Leu Arg
         50                         55                       60
Lys Gly Arg Gly Leu Ala Gly Met Val Met Lys Thr Gly Lys Arg Met
65                         70                         75                       80
Val Ile Ala Asp Val Asp Thr Ala Leu Ser Pro Glu Glu Lys Val Lys
                     85                         90                       95
Phe Pro Ile Ile Leu Ser Glu Ser Leu Thr Ala Val Val Ala Val Pro
             100                        105                      110
Leu Trp Leu Glu Asn Ser Met Tyr Gly Val Leu Leu Leu Gly Gln Arg
             115                        120                      125
Asn His Gln Pro Leu Pro Gln Ser Leu Asp Gln Leu Asn Ile Glu Lys
         130                        135                      140
Gln Ile Gly Ile Phe Thr Glu Ile Asn
145                        150
```

<210> 5066
<211> 81
<212> PRT
<213> S.epidermidis

<400> 5066
```
Leu Glu Ser Val Asn Asn Met Ile Ser Val Asn Asn Gly Val Lys Asn
1                5                          10                       15
Lys Lys Tyr Lys Val Lys His Ile Gly Ile Ser Asn Lys Asn Met Leu
                 20                         25                       30
```

Tyr Arg Leu Gly Ala Leu Gly Leu Asn Ile Gly Ser Glu Ile Ser Ile
    35   40   45

Lys Gln Lys Cys Leu Leu Asn Gly Pro Ser Val Val Glu Val Asn Gly
    50   55   60

Gln His Leu Ser Leu Arg Gln Arg Asp Ala Arg Leu Ile Thr Leu Glu
65   70   75   80

Glu

<210> 5067
<211> 204
<212> PRT
<213> S.epidermidis

<400> 5067
Ile Arg Ser Val Lys Met Ser Glu Ser Asn His Ile Thr Trp His Asp
1   5   10   15

Ser Glu Val Thr Lys Lys Gln Arg Gln His Lys Asn Gly His Lys Ser
    20   25   30

Ala Val Ile Trp Phe Thr Gly Leu Ser Gly Ser Gly Lys Ser Thr Val
    35   40   45

Ser Val Ala Leu Glu Lys Glu Leu Phe Asn Glu Gly Lys Gln Thr Tyr
    50   55   60

Arg Leu Asp Gly Asp Asn Val Arg His Gly Leu Asn Lys Asn Leu Gly
65   70   75   80

Phe Ser Pro Glu Asp Arg Ser Glu Asn Ile Arg Arg Ile Gly Glu Val
          85   90   95

Ala Lys Leu Met Val Asp Ala Gly Ala Leu Thr Val Thr Ala Phe Ile
        100   105   110

Ser Pro Tyr Lys Glu Asp Arg Glu Gly Val Arg Ala Leu Leu Glu Asp
        115   120   125

Asn Glu Phe Ile Glu Val Tyr Thr Lys Cys Ser Val Glu Glu Cys Glu
        130   135   140

Lys Arg Asp Pro Lys Gly Leu Tyr Lys Lys Ala Arg Ser Gly Glu Ile
145   150   155   160

Pro Glu Phe Thr Gly Ile Ser Ala Pro Tyr Gln Ala Pro Glu Asn Pro
        165   170   175

Glu Ile Thr Ile Asp Thr Glu His Asp Thr Ile Glu Gln Ser Val Val
        180   185   190

Gln Ile Ile Arg Tyr Leu Lys Glu His Glu Tyr Ile
    195   200

<210> 5068
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5068
Arg Asn Phe Val Cys Ile Cys Thr Ser Arg Thr Leu Tyr Tyr Lys Arg
1   5   10   15

Arg Ser Lys Ile Lys Tyr Ile Arg Ser Gln Ser Leu Pro Asp His Lys
    20   25   30

Val Val Val Asp Phe Phe Tyr Phe Lys Pro Glu Ser Leu Pro Gly Asn
    35   40   45

Tyr

```
<210> 5069
<211> 72
<212> PRT
<213> S.epidermidis

<400> 5069
Gly Lys Ile Val Asp Ile Leu Phe Ile Phe Gly Leu Leu Gly Gly Ala
1               5                   10                  15
Ala Thr Ser Leu Ala Leu Gly Val Pro Met Ile Ser Ala Gly Ile Glu
            20                  25                  30
Arg Leu Thr Gly Leu Asp Gly Ser Asn Met Ile Leu Arg Ser Ile Ile
        35                  40                  45
Leu Leu Thr Ile Thr Val Tyr Phe Arg Asn Gln Phe Leu His Arg Phe
    50                  55                  60
Glu Lys Arg Tyr Ser Lys Ile Lys
65                  70
```

```
<210> 5070
<211> 304
<212> PRT
<213> S.epidermidis

<400> 5070
Glu Thr Thr Val Ala Tyr Lys Gln Phe Ile Arg Phe Ala Gln His His
1               5                   10                  15
Leu His Phe His His Leu Gly Arg His Phe Met Val Ile Ser Lys Lys
            20                  25                  30
Leu Ser Leu Ile Thr Ile Gly Ile Leu Ile Ser Ile Leu Leu Ile Ser
        35                  40                  45
Leu Leu Ile Asp Gln Thr Ile Ser His Gln Phe Met Asn Gln Asn Ser
    50                  55                  60
Ile Phe Gly Thr Leu Phe Gln Asn Tyr Gly Leu Phe Pro Pro Thr Leu
65                  70                  75                  80
Ile Leu Ile Ile Ser Thr Val Ile Leu Asn Tyr Tyr Ile Phe Thr Thr
                85                  90                  95
Phe Gln Asn Lys Leu Ala Lys Ile Leu Thr Leu Leu Ile Ser Phe Ile
            100                 105                 110
Phe Thr Leu Ile Lys Thr Asn Glu Phe Val Ser Glu Thr Ala Gln Tyr
        115                 120                 125
Met Leu Ser Thr Ser Ala Asn Ile Lys Asn His Lys Pro Met Gly Met
        130                 135                 140
Ala Asn Asn Glu Gly Asn Ala Gly Asn Ala Leu Ser Leu Gly Met Ser
145                 150                 155                 160
Phe Phe Ile Ser Leu Ile Ile Leu Ile Ile Ile Thr Phe Ile Cys Tyr
                165                 170                 175
Gln Phe Trp Leu Lys His Thr Asn Asn Gln Glu Leu Tyr His Leu Phe
            180                 185                 190
Lys Val Ser Leu Ile Ser Phe Met Ile Leu Phe Ile Gly Leu Glu Leu
        195                 200                 205
Val Asp Ser Leu Lys His Leu Trp Gly Arg Phe Arg Pro Tyr Glu Ile
    210                 215                 220
Thr Asp Lys Ala Gly His Phe Thr His Trp Leu Thr Ile Asn Gly Asn
225                 230                 235                 240
Thr Gly His Ser Ser Phe Pro Ser Gly His Thr Gly Asn Gly Ala Phe
                245                 250                 255
```

Leu Met Phe Ile Ala Phe Tyr Phe Lys Lys Leu Arg Thr Gln Lys Ile
      260   265   270

Val Phe Ser Ile Gly Leu Cys Tyr Ser Ile Leu Met Ala Leu Ser Arg
      275   280   285

Ile Arg Ile Gly Ala His Phe Thr Asn Asp Tyr Cys Arg Phe Tyr His
      290   295   300

<210> 5071
<211> 349
<212> PRT
<213> S.epidermidis

<400> 5071
Met Asn Asn Val Lys Glu Ser Ile Ile Val Ala Phe Ala Phe Val Gly
1   5   10   15

Val Val Val Gly Ala Gly Phe Ala Thr Gly Gln Glu Ile Phe Gln Phe
      20   25   30

Phe Thr Ser His Gly Ile Tyr Ser Ile Gly Gly Ile Phe Ile Thr Gly
      35   40   45

Leu Ile Leu Thr Leu Gly Gly Ile Phe Val Leu Asn Thr Gly Phe Arg
      50   55   60

Leu Arg Ser Gln Asn His Ser Glu Ser Ile Arg Tyr Tyr Leu His Pro
65   70   75   80

Thr Ile Ala Lys Leu Phe Asp Ile Ile Leu Thr Val Phe Leu Phe Ser
          85   90   95

Leu Ala Ile Ile Met Thr Ala Gly Gly Ala Ser Thr Ile Asn Glu Ser
      100   105   110

Phe Gly Leu Pro Phe Trp Leu Ser Ser Phe Ile Leu Val Ile Leu Ile
      115   120   125

Leu Ile Thr Leu Phe Leu Lys Phe Asp Arg Leu Ile Ala Val Leu Gly
      130   135   140

Gly Val Thr Pro Phe Leu Val Ala Val Val Val Met Ile Ala Val Tyr
145   150   155   160

Tyr Phe Ile Thr Gly Asp Leu Asn Phe Ser Asp Val Ser Gln Tyr Ser
          165   170   175

Asn Gln Asn Lys Ser Ile Ser Pro Gly Trp Trp Phe Asp Ala Ile Asn
      180   185   190

Tyr Ala Ser Leu Gln Ile Ala Ala Ala Phe Ser Phe Leu Thr Val Met
      195   200   205

Gly Gly Lys Leu Arg Tyr Gln Ser Ser Thr Ile Tyr Gly Gly Leu Ile
      210   215   220

Gly Gly Ile Ile Val Thr Leu Leu Leu Leu Leu Ile Asn Phe Gly Leu
225   230   235   240

Val Thr Glu Phe Asn Gln Ile Lys Glu Val Ala Leu Pro Ser Leu Leu
          245   250   255

Leu Ala Lys Gln Ile Ser Pro Ser Ile Gly Ile Ile Met Ser Val Ile
      260   265   270

Met Val Leu Val Ile Tyr Asn Thr Val Val Gly Leu Met Tyr Ala Phe
      275   280   285

Ala Ser Arg Phe Ser Arg Pro Phe Thr Lys Arg Tyr Tyr Ile Leu Ile
      290   295   300

Val Met Met Ala Ile Ile Thr Phe Ala Cys Thr Phe Val Gly Phe Ile
305   310   315   320

Ser Leu Ile Gly Lys Val Phe Pro Ile Met Gly Leu Phe Gly Phe Ile
          325   330   335

Leu Leu Ile Pro Val Ile Tyr Lys Gly Ile Leu Arg Lys

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<210> 5072
<211> 243
<212> PRT
<213> S.epidermidis

<400> 5072
Ile Lys Arg Leu Lys Glu Gly Leu Leu Met Ile Asp Leu Trp Pro Ala
1               5                   10                  15
Ile Asp Leu Ile Asn Ser Thr Ser Val Arg Leu Thr Glu Gly Lys Tyr
            20                  25                  30
Asp Ser Lys Glu Lys Met Glu Lys Ser Val Glu Asp Ser Ile Arg Phe
        35                  40                  45
Tyr Ser Gln Phe Lys Cys Val Lys Arg Ile His Ile Val Asp Leu Ile
    50                  55                  60
Gly Ala Lys Ala Lys Glu Val Lys Glu Phe Asp Tyr Ile Arg Ser Leu
65                  70                  75                  80
Arg Lys Leu Thr Thr Lys Pro Ile Glu Val Gly Gly Gly Ile Arg Ser
            85                  90                  95
Lys Gln Thr Ile Glu Asn Tyr Ile His Ser Gly Ile Asp Tyr Cys Ile
            100                 105                 110
Val Gly Thr Lys Gly Ile Gln Asp Ile Glu Trp Leu Thr His Met Thr
            115                 120                 125
His Gln Phe Pro Asn Lys Leu Tyr Leu Ser Val Asp Ala Phe Gly Glu
    130                 135                 140
Lys Ile Lys Ile Asn Gly Trp Lys Glu Asp Ala Lys Leu Asn Leu Phe
145                 150                 155                 160
Asp Tyr Val Ala Lys Ile Glu His Leu Pro Leu Gly Gly Val Ile Tyr
                165                 170                 175
Thr Asp Ile Ser Lys Asp Gly Lys Leu Ser Gly Pro Asn Phe Asp Leu
            180                 185                 190
Thr Gly Arg Leu Ala Leu Tyr Thr Ser Leu Pro Val Ile Ala Ser Gly
            195                 200                 205
Gly Ile Arg His Gln Glu Asp Leu Phe Arg Leu Glu Ser Leu Asn Val
            210                 215                 220
His Ala Ala Ile Val Gly Lys Ala Ala His Leu Asp Glu Phe Trp Glu
225                 230                 235                 240
Gly Leu Ser


<210> 5073
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5073
Asn Val Ser Val Cys Lys Tyr Ile Ser Leu His Ser Lys Ile Ile Gln
1               5                   10                  15
Arg Leu Trp Arg Arg Lys Ile Phe Lys Ile Lys Glu Asp Asp Lys Ser
            20                  25                  30
Tyr Leu Tyr Ala Gln Arg Met Val Glu Met Ile Asn Ser
        35                  40                  45


<210> 5074
<211> 48
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<212> PRT
<213> S.epidermidis

<400> 5074
Ser Ser Leu Val Leu Cys Ser Lys Cys Asn Lys Asn Tyr Tyr Ile Thr
1   5   10   15
Leu Lys Thr Asp Ile His Ile Leu Gln Ser Asn Leu Tyr Leu Arg Gly
            20   25   30
Phe Tyr Tyr Glu Ser Ser Ser Met Val Trp Thr Lys Gly Cys Thr Arg
        35   40   45

<210> 5075
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5075
Phe Val Leu Val Arg Ala Ser Leu Val Ala Asn Glu Ser Val Ala Phe
1   5   10   15
Val Ser Ile Asp Trp Val Lys Leu Glu Leu Met Phe Phe Ser Glu Asp
            20   25   30
Asp Val Phe Asp Cys Val Asp Leu Glu Val Thr Phe Glu Asp Leu Phe
        35   40   45

<210> 5076
<211> 68
<212> PRT
<213> S.epidermidis

<400> 5076
Thr Val Ile Val Ser Lys Met Ile Glu Arg Lys Ile Ile Leu Asp Pro
1   5   10   15
Ser Lys Pro Val Asn Arg Ser Ile Pro Ala Glu Ile Ile Gly Thr Pro
            20   25   30
Arg Ala Ser Asp Val Ala Ala Pro Pro Ser Lys Pro Lys Ile Asn Lys
        35   40   45
Ile Ser Thr Ile Phe Pro His Asn Leu Ser Val Cys Pro Phe Lys Ile
    50   55   60
Gly Arg Gln Ala
65

<210> 5077
<211> 47
<212> PRT
<213> S.epidermidis

<400> 5077
Met Lys Pro Val Asn Asp Asn Gly Ile Arg Leu Ala Pro Ala Glu Asn
1   5   10   15
Arg Ile Asn Gly Ile Ala Val Ile Ala Pro Glu Asn Ser Ser Gln Asn
            20   25   30
Asp Asp Ile Phe Asn Pro Asn Val Met Cys Cys Cys Cys His Arg
        35   40   45

<210> 5078
<211> 46

<212> PRT
<213> S.epidermidis

<400> 5078
Phe Val Ala Val Asp Ser Val Asp Ala Asn Val Glu Gly Ile Thr Val
1   5   10   15
Thr Glu Arg Thr Asp Val Thr Ser Ile Glu Leu Lys Val Leu Asn Ile
            20   25   30
Phe Ile Ser Met Ile Thr Pro Tyr Ile Lys Asp Gly Ile Phe
        35   40   45

<210> 5079
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5079
Tyr Asn Lys Val Lys Ala Gln Arg Ala Glu Asn His Gln Lys Lys Tyr
1   5   10   15
Lys Lys Asp Asn Phe Tyr Ile Ile Ser Ile Glu Ile Val Phe Ile Tyr
            20   25   30
Leu Ser Trp Asn Phe Leu Ser Gln Pro Leu Phe
        35   40

<210> 5080
<211> 315
<212> PRT
<213> S.epidermidis

<400> 5080
Lys Asp Lys Val Gly Glu Val Glu Met Asn Lys Asn Lys Val Ile Val
1   5   10   15
Ile Gly Ser Thr Asn Val Asp Lys Phe Leu Asn Val Lys Arg Phe Pro
            20   25   30
Lys Pro Gly Glu Thr Leu His Ile Asn Gln Ala Gln Lys Glu Phe Gly
        35   40   45
Gly Gly Lys Gly Ala Asn Gln Ala Ile Ala Ala Ser Arg Leu Ala Ala
    50   55   60
Asp Thr Thr Phe Ile Ser Lys Val Gly Lys Asp Gly Asn Ala Asn Phe
65   70   75   80
Ile Leu Glu Asp Phe Lys Lys Ala Gly Ile His Thr Gln Tyr Ile Leu
            85   90   95
Thr Ser Glu Ser Glu Glu Thr Gly Gln Ala Phe Ile Thr Val Asp Glu
            100   105   110
Ala Gly Gln Asn Thr Ile Leu Val Tyr Gly Gly Ala Asn Met Thr Leu
            115   120   125
Ser Ala Thr Asp Val Glu Met Ser Val Asp Ala Phe Ile Gly Ala Asp
        130   135   140
Phe Val Val Ala Gln Leu Glu Val Pro Phe Glu Ala Ile Glu Gln Ala
145   150   155   160
Phe Lys Ile Ala Arg Lys Gln Asn Ile Thr Thr Val Leu Asn Pro Ala
            165   170   175
Pro Ala Ile Glu Leu Pro Lys Ser Leu Leu Glu Leu Thr Asp Ile Ile
        180   185   190
Ile Pro Asn Glu Thr Glu Ala Glu Leu Leu Thr Gly Ile Ser Ile Asn
        195   200   205

```
Asn Glu Ser Asp Met Lys Glu Thr Ala Thr Tyr Phe Leu Asp Leu Gly
    210                 215                 220
Ile Ser Ala Val Leu Ile Thr Leu Gly Glu Gln Gly Thr Tyr Cys Ala
225                 230                 235                 240
Tyr Gln Glu Gln Tyr Lys Met Ile Pro Ala Cys Asn Val Lys Ala Ile
                245                 250                 255
Asp Thr Thr Ala Ala Gly Asp Thr Phe Ile Gly Ala Phe Leu Ser Glu
                260                 265                 270
Leu Asn Lys Asp Leu Ser Asn Leu Glu Ser Ala Ile Arg Leu Ala Asn
            275                 280                 285
Gln Ala Ser Ser Leu Thr Val Gln Arg Lys Gly Ala Gln Ala Ser Ile
            290                 295                 300
Pro Thr Arg Lys Glu Val Glu Ala Glu Tyr Asn
305                 310                 315
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<210> 5081
<211> 1186
<212> PRT
<213> S.epidermidis
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<400> 5081
Glu Val Lys Val Ser Asp Val Leu Ile Asp Val Asp Val Leu Asp Glu
1                   5                   10                  15
Ser Glu Met Leu Val Leu Asp Asp Ser Leu Thr Asp Val Leu Ser Leu
            20                  25                  30
Val Asp Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ser Asp Val Asp
            35                  40                  45
Val Leu Val Glu Ser Glu Thr Leu Val Leu Asp Asp Ser Leu Thr Asp
            50                  55                  60
Val Leu Ser Leu Ser Asp Ser Leu Thr Leu Val Asp Val Asp Ala Leu
65                  70                  75                  80
Ser Asp Val Asp Val Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu
            85                  90                  95
Ser Glu Met Leu Val Leu Val Glu Pro Leu Asn Asp Val Leu Ala Leu
            100                 105                 110
Ser Glu Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ala Asp Val Asp
            115                 120                 125
Val Leu Val Glu Ser Glu Thr Leu Val Leu Val Glu Pro Leu Asn Asp
            130                 135                 140
Val Leu Ala Leu Leu Glu Ser Leu Thr Leu Val Asp Val Asp Ala Leu
145                 150                 155                 160
Ala Asp Val Asp Ala Leu Val Glu Ser Glu Thr Leu Val Leu Val Asp
                165                 170                 175
Ser Leu Asn Asp Val Leu Ser Leu Phe Glu Ser Leu Ser Leu Val Asp
                180                 185                 190
Val Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu Thr Leu
            195                 200                 205
Val Leu Val Asp Ser Leu Asn Asp Val Leu Ala Leu Val Asp Ser Leu
    210                 215                 220
Ser Leu Val Asp Val Asp Ala Leu Ser Asp Val Asp Ala Leu Val Glu
225                 230                 235                 240
Ser Glu Thr Leu Val Leu Val Glu Ser Leu Lys Asp Val Leu Ala Leu
                245                 250                 255
Phe Glu Ser Leu Thr Leu Ile Asp Val Asp Ala Leu Ser Asp Val Asp
                260                 265                 270
Val Leu Val Glu Ser Glu Met Leu Val Leu Val Asp Ser Leu Lys Asp
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              275                    280                    285
Val Leu Ala Leu Ser Glu Ser Leu Ser Leu Val Asp Val Asp Pro Leu
      290                    295                    300
Ser Asp Val Asp Val Leu Val Glu Ser Glu Arg Leu Val Leu Leu Glu
305                    310                    315                    320
Ser Leu Asn Asp Val Leu Val Leu Phe Glu Ala Leu Thr Leu Val Asp
                  325                    330                    335
Val Asp Val Leu Val Asp Ser Glu Thr Leu Val Leu Val Glu Ser Leu
              340                    345                    350
Asn Asp Val Leu Ala Leu Ser Glu Ser Leu Ser Leu Val Asp Val Asp
          355                    360                    365
Ala Leu Ser Asp Val Asp Ile Leu Val Glu Ser Glu Arg Leu Val Leu
      370                    375                    380
Val Asp Ser Leu Asn Asp Val Leu Ala Leu Phe Glu Ser Leu Thr Leu
385                    390                    395                    400
Val Asp Val Asp Ala Leu Ser Asp Val Asp Ala Leu Val Glu Ser Glu
                  405                    410                    415
Thr Leu Val Leu Thr Asp Ser Leu Asp Asp Val Leu Ala Leu Ser Glu
                  420                    425                    430
Ser Leu Ser Leu Val Asp Ala Asp Ala Leu Ser Asp Val Asp Val Leu
          435                    440                    445
Val Glu Ser Glu Thr Leu Val Leu Val Glu Pro Leu Asn Asp Val Leu
      450                    455                    460
Val Leu Phe Asp Ser Leu Thr Leu Val Asp Val Asp Ala Leu Ser Asp
465                    470                    475                    480
Val Asp Val Leu Val Asp Ser Glu Ser Leu Val Leu Thr Asp Ser Leu
                  485                    490                    495
Asp Asp Val Leu Ala Leu Ser Glu Ser Leu Thr Leu Val Asp Val Asp
              500                    505                    510
Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu Thr Leu Val Leu
          515                    520                    525
Asn Asp Ser Leu Met Asp Val Leu Val Leu Phe Asp Ser Leu Thr Leu
      530                    535                    540
Val Asp Val Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu
545                    550                    555                    560
Met Leu Val Leu Val Glu Pro Leu Asn Asp Val Leu Ala Leu Ser Glu
                  565                    570                    575
Ser Leu Ser Leu Val Asp Ala Asp Ala Leu Ser Asp Val Asp Val Leu
              580                    585                    590
Val Glu Ser Glu Thr Leu Val Leu Asn Glu Pro Leu Asn Asp Val Leu
          595                    600                    605
Ala Leu Phe Glu Ser Leu Thr Leu Val Asp Val Asp Ala Leu Ser Asp
      610                    615                    620
Val Asp Val Leu Val Glu Ser Glu Arg Leu Val Leu Val Glu Pro Leu
625                    630                    635                    640
Lys Asp Val Leu Ala Leu Ser Glu Ser Leu Ser Leu Val Asp Val Asp
                  645                    650                    655
Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu Arg Leu Val Leu
              660                    665                    670
Val Glu Pro Leu Asn Asp Val Leu Ala Leu Ser Asp Ser Leu Ser Leu
          675                    680                    685
Val Asp Val Asp Ala Leu Ser Asp Val Asp Ala Leu Val Glu Ser Glu
      690                    695                    700
Thr Leu Val Leu Ile Asp Ser Leu Asn Asp Val Leu Ser Leu Val Glu
705                    710                    715                    720
Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ser Asp Val Asp Val Leu
```

```
                    725                         730                         735
Val Glu Ser Glu Thr Leu Val Leu Asn Asp Ser Leu Met Asp Val Leu
                740                         745                     750
Ala Leu Ser Glu Ser Leu Thr Leu Val Asp Val Asp Ala Leu Ser Asp
            755                         760                     765
Val Asp Ala Leu Val Glu Ser Glu Thr Leu Val Leu Val Asp Ser Leu
        770                         775                     780
Asn Asp Val Leu Ser Leu Val Glu Ser Leu Ser Leu Val Asp Val Asp
785                         790                         795                     800
Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu Arg Leu Val Leu
                805                         810                     815
Val Asp Ser Leu Asn Asp Val Leu Val Leu Ser Asp Ser Leu Ser Leu
            820                         825                     830
Val Asp Val Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu
        835                         840                     845
Met Leu Val Leu Asn Asp Pro Leu Asn Asp Val Leu Ala Leu Phe Asp
    850                         855                     860
Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ser Asp Val Asp Ala Leu
865                         870                         875                     880
Val Glu Ser Glu Thr Leu Val Leu Asn Asp Ser Leu Asn Asp Val Leu
                885                         890                     895
Ser Leu Val Glu Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ser Asp
            900                         905                     910
Val Asp Ala Leu Val Glu Pro Glu Arg Leu Val Leu Val Asp Ser Leu
        915                         920                     925
Asn Asp Val Leu Val Leu Ser Asp Ser Leu Ser Leu Val Asp Val Asp
    930                         935                     940
Ala Leu Ser Asp Val Asp Ala Leu Val Glu Pro Glu Arg Leu Val Leu
945                         950                         955                     960
Val Asp Ser Leu Asn Asp Val Leu Leu Leu Phe Asp Ser Leu Ser Leu
                965                         970                     975
Ala Asp Ile Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu Ser Glu
            980                         985                     990
Thr Leu Val Leu Val Asp Ser Leu Asn Asp Val Leu Ala Leu Ser Asp
        995                         1000                        1005
Ser Leu Ser Leu Val Asp Val Asp Ala Leu Ser Asp Val Asp Val Leu
        1010                        1015                        1020
Val Glu Ser Glu Thr Leu Val Leu Val Asp Leu Leu Asn Asp Val Leu
1025                        1030                        1035                        1040
Ala Leu Leu Glu Ser Leu Thr Leu Val Asp Val Asp Ala Leu Ser Asp
                1045                        1050                        1055
Val Asp Val Leu Thr Asp Ser Asp Asn Ser Leu Leu Val Leu Ala Asp
            1060                        1065                        1070
Ser Leu Ala Phe Ile Asp Ala Leu Ser Asp Val Asp Val Leu Val Glu
        1075                        1080                        1085
Ser Glu Met Leu Val Leu Val Glu Pro Leu Thr Leu Val Asp Val Asp
    1090                        1095                        1100
Ala Leu Ser Asp Val Asp Thr Leu Ala Glu Ser Glu Thr Leu Val Leu
1105                        1110                        1115                        1120
Val Asp Ser Leu Asn Asp Val Leu Leu Leu Val Asp Ser Leu Phe Leu
                1125                        1130                        1135
Ala Asp Ser Asp Ala Leu Ser Asp Val Asp Val Leu Ala Asp Ser Asp
            1140                        1145                        1150
Asn Cys Leu Leu Val Leu Ala Asp Ser Leu Ala Trp Ile Asp Val Leu
            1155                        1160                        1165
Phe Asp Val Asp Ala Leu Asn Asp Ser Glu Arg Leu Leu Leu Val Asp
```

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    1170                1175                1180
Asn Asp
1185
```

```
<210> 5082
<211> 447
<212> PRT
<213> S.epidermidis
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```
<400> 5082
Asn Ile Glu Val Lys Ile Val Arg His Lys Leu Gly Asp Ser Ser Met
1               5                   10                  15
Leu Leu Phe Ile Ile Glu Ile Ile Ile Met Ile Leu Ala Ile Leu Leu
            20                  25                  30
Gly Leu Arg Thr Ala Gly Ala Leu Gly Cys Gly Ile Phe Ala Ile Val
        35                  40                  45
Ala Gln Leu Ile Met Ile Phe Gly Phe Gln Leu Pro Pro Gly Ser Ala
        50                  55                  60
Pro Val Thr Ala Val Leu Ile Ile Leu Ser Ile Gly Ile Ala Gly Gly
65                  70                  75                  80
Thr Leu Gln Ala Thr Gly Gly Ile Asp Tyr Leu Val Tyr Ile Ala Ser
                85                  90                  95
Arg Val Ile Glu Arg Phe Pro Lys Ser Ile Ile Phe Ile Ala Pro Met
            100                 105                 110
Ile Val Phe Val Phe Val Phe Gly Ile Gly Thr Ala Asn Ile Ala Leu
            115                 120                 125
Ser Leu Glu Pro Ile Ile Ala Lys Thr Ala Gln Lys Ala Arg Ile Gln
    130                 135                 140
Pro Lys Arg Ala Leu Thr Ala Ser Val Leu Thr Ala Asn Leu Ala Leu
145                 150                 155                 160
Leu Cys Ser Pro Ala Ala Ser Ala Thr Ala Tyr Ile Ile Ser Val Leu
                165                 170                 175
Ala Gly Tyr Glu Ile Ser Met Gly Lys Tyr Leu Ser Ile Val Leu Pro
            180                 185                 190
Thr Ala Leu Ile Ser Met Leu Met Leu Ser Thr Phe Cys Thr Phe Val
            195                 200                 205
Gly Arg Lys Glu His Val Arg Asp Glu Ser Glu Arg Leu Val Gln Met
    210                 215                 220
Pro Glu Val Glu Ile Lys Asn Asp Phe Ser Leu Lys Val Lys Ile Gly
225                 230                 235                 240
Val Ile Ser Phe Leu Leu Cys Val Met Gly Ile Leu Thr Phe Gly Ile
                245                 250                 255
Phe Pro Asn Leu Met Pro Gln Phe Asn Val Asn Gly Asp Val Val Lys
            260                 265                 270
Val Glu Met Thr Glu Ile Val Gln Phe Phe Met Tyr Leu Ser Ala Thr
            275                 280                 285
Ile Asn Leu Leu Leu Ile Lys Ile Asn Thr Ser Asp Ile Leu Ser Ser
    290                 295                 300
Asn Ile Thr Gln Ser Ala Met Gly Ala Leu Phe Ala Val Leu Gly Pro
305                 310                 315                 320
Gly Trp Leu Gly Ala Thr Ile Phe Asn Ala Pro His Asn Leu Lys Ile
            325                 330                 335
Leu Lys Asn Asp Ile Gly Ser Ile Ile Ser Glu Val Pro Trp Leu Val
            340                 345                 350
Ile Ile Leu Val Ser Val Val Ala Met Ile Val Ile Ser Gln Thr Ala
            355                 360                 365
```

Thr Ala Ser Ile Met Val Pro Ile Val Met Ser Leu Gly Ile Pro Pro
    370   375   380
Ile Tyr Phe Val Ala Met Val Gln Thr Leu Asn Val Asn Phe Val Ile
385   390   395   400
Pro Ala Gln Pro Thr Leu Leu Phe Ala Val Glu Leu Asp Glu Thr Gly
                405   410   415
Arg Thr Arg Pro Thr Ser Phe Met Ile Pro Gly Phe Phe Val Ile Thr
            420   425   430
Val Ser Val Ile Thr Gly Phe Val Ile Lys Thr Ile Leu Gly Tyr
        435   440   445

<210> 5083
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5083
Ala Ile Arg Val Arg Asn Ile Lys Phe Tyr Ser Thr Phe Val Leu Leu
1   5   10   15
Leu Leu Phe Ile His Asn Asn Leu Phe Tyr Thr Leu Phe Gln Glu Phe
            20   25   30
Ile Glu Ile Asp Asn Ser His Ile Leu
        35   40

<210> 5084
<211> 280
<212> PRT
<213> S.epidermidis

<400> 5084
Val Ser Phe Leu Arg Phe Glu Gln Ser Arg Leu Tyr Lys His Arg Glu
1   5   10   15
Asp Asp Thr Met Phe Ile Ser Lys Gln Glu Leu Tyr Glu Lys Leu Gln
            20   25   30
Tyr Val Thr Pro Arg Thr Phe Ala Tyr Leu Asn Glu Ile Asp Tyr Tyr
            35   40   45
Asn Leu Leu Met Ile Ile Glu Glu His Gln Ile Ser Ile Pro Pro Ile
        50   55   60
His Gln Leu Arg Lys Thr Leu Arg Gly Ser Lys Ile Met Lys Pro Lys
65   70   75   80
Asn Arg Val Asp Asn Cys Tyr Ile His Leu Lys Asp Glu Ile Pro Thr
                85   90   95
Pro Ile Asn Asn Glu Gln Leu Ser Phe Leu His Phe Tyr Pro Arg Gln
            100   105   110
Gln Ile His Leu Ile Leu Ser Ala Tyr Ser Arg Met Lys Ser Leu Lys
            115   120   125
Leu Gln Ser Gln Lys His Cys Leu Lys Leu Lys Phe Pro Leu Asp Gln
        130   135   140
His Ser Ile Arg Lys Glu Ile Thr Pro Pro Gln Ser Ser Asp Lys Asp
145   150   155   160
Asn Asp Ile Leu Ile Cys Leu Leu Gln Lys Leu Ile Asn Glu Ile Thr
                165   170   175
Lys Cys Gln Val Pro Val Ser Leu Lys Asn Asn Ser Phe Glu Ile Lys
            180   185   190
Leu Pro Asn Tyr Ile Ile Lys Val Asp Leu Asn Tyr His Glu Gln Gln
        195   200   205

```
Asp His Leu Tyr Pro Leu Gln Tyr Ser Ile His Ala Trp His Arg Asp
    210                 215                 220
Phe Gln Tyr Leu Glu Ile Ser Asn Thr Phe Thr Ile Pro Ser Leu Asn
225                 230                 235                 240
Asp Leu Ile Phe His Ile Gln Lys Leu Phe Leu Leu Ile Phe Gln Leu
                245                 250                 255
Pro Glu His Leu Ala Arg Gln Glu Tyr Ser Leu Ser Gln Tyr Tyr Phe
                260                 265                 270
Tyr Ser Gln Cys His Thr Lys Asn
            275                 280


<210> 5085
<211> 249
<212> PRT
<213> S.epidermidis

<400> 5085
Leu Lys Leu Val Arg Asn Gly Leu Val Lys Met Phe Leu Asn Leu Asn
1                   5                   10                  15
Asn Glu Gln Gln His Ala Leu Asp Ala Ala Lys Gln Ala Phe Gly Pro
                20                  25                  30
Met Leu Glu Gly Leu Val Lys Tyr Ser Ile Pro Ile Thr Leu Val Thr
            35                  40                  45
Phe Ile Leu Gly Leu Ile Ile Ala Leu Phe Thr Ala Leu Met Arg Ile
        50                  55                  60
Ser Thr Ser Lys Leu Leu Arg Gly Ile Ala Arg Val Tyr Val Ser Ile
65                  70                  75                  80
Ile Arg Gly Thr Pro Met Ile Val Gln Leu Phe Ile Ile Phe Tyr Gly
                85                  90                  95
Ile Pro Glu Leu Gly Arg Leu Val Thr Asn Asn Ala Asp Asn Gln Trp
                100                 105                 110
Thr Leu Ala Pro Val Ile Ala Ala Val Ile Gly Leu Ser Leu Asn Val
            115                 120                 125
Gly Ala Tyr Ala Ser Glu Ile Ile Arg Gly Gly Ile Leu Ser Ile Pro
            130                 135                 140
Lys Gly Gln Thr Glu Ala Ala Tyr Ser Ile Gly Met Asn Tyr Arg Gln
145                 150                 155                 160
Thr Val Gln Arg Ile Ile Leu Pro Gln Ala Ile Arg Val Ser Ile Pro
                165                 170                 175
Ala Leu Gly Asn Thr Phe Leu Ser Leu Ile Lys Asp Thr Ser Leu Leu
            180                 185                 190
Gly Phe Ile Leu Val Ala Glu Met Phe Arg Lys Ala Gln Glu Val Ala
            195                 200                 205
Ser Thr Thr Tyr Glu Tyr Leu Thr Ile Tyr Leu Leu Val Ala Leu Met
        210                 215                 220
Tyr Trp Val Val Cys Phe Ile Ile Ser Ile Ile Gln Gly Trp Tyr Glu
225                 230                 235                 240
Ser Arg Ile Glu Arg Gly Tyr Arg Ser
                245


<210> 5086
<211> 62
<212> PRT
<213> S.epidermidis

<400> 5086
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Leu Arg Lys Val Leu Ile Ser Leu Asn Phe Lys Val Phe Leu Ile Ile
1   5   10   15
Ile Phe His Asp Phe Leu Ile Tyr Tyr Glu His Gly Phe Met Tyr Ser
            20   25   30
Arg Phe Lys Glu His Ala Glu Gln Ser Ser His Leu Phe Ile Leu Lys
        35   40   45
Ser His Leu Lys Pro Phe Pro Pro Phe Arg Tyr Thr Tyr Asp
    50   55   60

<210> 5087
<211> 136
<212> PRT
<213> S.epidermidis

<400> 5087
Ser Val Lys Val Met Lys Leu Lys Lys Glu Ile Asn Val Val Gly Ala
1   5   10   15
Ile Ile Tyr Ser Asp Asn Lys Ile Leu Cys Ala Gln Arg Ser Glu Asn
            20   25   30
Met Ser Leu Pro Leu Lys Trp Glu Phe Pro Gly Gly Lys Ile Glu Asn
        35   40   45
Gly Glu Thr Glu Lys Asp Ala Leu Ile Arg Glu Ile Lys Glu Glu Met
    50   55   60
Lys Cys Asp Leu Ile Val Gly Asp Lys Val Thr Thr Thr Thr Tyr Glu
65   70   75   80
Tyr Asp Phe Gly Ile Val Asn Leu Thr Thr Tyr Lys Cys Glu Leu Asn
                85   90   95
Asn Lys Lys Pro Thr Leu Thr Glu His Lys Glu Ile Lys Trp Val Gly
            100   105   110
Lys Asn Glu Leu Asp Lys Leu Asp Trp Ala Pro Ala Asp Val Pro Ala
        115   120   125
Val Arg Arg Ile Ile Glu Glu Asn
    130   135

<210> 5088
<211> 69
<212> PRT
<213> S.epidermidis

<400> 5088
Ile Ile Glu Val Met Thr Met Arg Asn Ala Ile Glu Glu Leu Ile Phe
1   5   10   15
Ser Asp Val Ser Ser Tyr Asp Ile Tyr Val Asn Thr Gly Val Asn Gln
            20   25   30
Gly Leu Val Gly Asp Ile Lys Asp Gly Tyr Leu Thr Ile Asp Ser Ile
        35   40   45
Pro Tyr Ile Asp Ala Glu Arg Leu Tyr Tyr Tyr Ser Leu Glu Arg Lys
    50   55   60
Ala Leu Val Thr Ser
65

<210> 5089
<211> 114
<212> PRT
<213> S.epidermidis

<400> 5089
```
Val Lys Glu Val Gly Val Met Phe Ile Gln Phe Lys Arg Leu Leu Ile
1               5                   10                  15
Gly Arg Pro Lys Arg Asn Arg Asp Leu Lys Asn Glu Lys Ile Ser Lys
            20                  25                  30
Phe Lys Gly Leu Ala Ile Leu Ser Ser Asp Ala Leu Ser Ser Val Ala
            35                  40                  45
Tyr Gly Pro Glu Gln Ile Leu Ile Thr Leu Ser Val Ile Gly Ala Val
    50                  55                  60
Ala Ser Trp Tyr Thr Leu Pro Ile Ala Gly Ala Val Leu Ile Leu Leu
65                  70                  75                  80
Thr Ala Leu Ile Leu Ser Tyr Arg Gln Ile Ile Tyr Ala Tyr Pro Lys
                85                  90                  95
Gly Gly Glu Arg Ile Leu Phe Leu Lys Gln Ile Leu Val Arg Asn Gly
            100                 105                 110
Asp Cys
```


<210> 5090
<211> 573
<212> PRT
<213> S.epidermidis

<400> 5090
```
Thr Leu Glu Val Glu Asn Met Lys Ser Ala Gln Ala Leu Lys Gln Asn
1               5                   10                  15
Leu Thr Ser Leu Asp Gly Gln Lys Tyr Gly Ala Tyr Lys Gln Ile Lys
            20                  25                  30
Asp Leu Tyr Glu Phe Asn Leu Phe Lys Leu Arg Ile Asn His Ile Gln
            35                  40                  45
Ala Asp Pro Phe Ala Pro Pro Ser Lys Met Ser Val Val Ile Asp Arg
    50                  55                  60
Gln Gln Ala Lys Phe Pro Asp Ser Leu Leu Asn Ser Glu Leu Lys Gln
65                  70                  75                  80
Arg Ala Val Ser Asp Tyr Leu Thr Arg Val Phe His Lys Gln Ile Gln
                85                  90                  95
Ser Ile Val Ala Gln Asp Lys Lys Val Ser Lys Ile Gln Ile Asp Ser
            100                 105                 110
Cys Gly Gln Glu Ile Leu Glu Arg Thr Ala Ile Val Ile Lys Asn His
    115                 120                 125
Gln Ile Glu Ala Arg Ile Glu Val Gly Leu Pro Ala Arg Gly Arg Thr
    130                 135                 140
Ile Leu Gly Arg Ile Ala Arg His Thr Leu Ile Asn Val Leu Pro Gln
145                 150                 155                 160
Ile Val Glu His Ala Leu Cys Tyr Arg Asn Ile Asn Gly Ser Gln Leu
                165                 170                 175
Gln Gln Gln Val Glu Leu Met Met Asp Gln Glu Glu Ile Arg Gln Gln
            180                 185                 190
Leu Val Lys Arg Asp Leu Val Ala Phe Val Ala Asn Gly Ala Ile Leu
            195                 200                 205
Pro Arg Lys Ser Gly Val Ser Asp Leu Pro Met Asn Asn Ala Ile Glu
    210                 215                 220
Phe Lys Ser Pro Lys Gln Tyr Glu Ile Val Met Lys Leu Ser Ser Gly
225                 230                 235                 240
Lys Val Ile Lys Gly Met Gly Ile Pro Lys Gly Ile Thr Leu Ile Val
            245                 250                 255
```

```
Gly Gly Gly Tyr His Gly Lys Ser Thr Leu Leu Glu Ala Leu Glu Arg
            260                 265                 270
Gly Val Tyr Asn His Ile Ala Gly Asp Gly Arg Glu Tyr Val Ile Thr
            275                 280                 285
Asn Gln Asp Ala Met Lys Ile Arg Ala Glu Asp Gly Arg Ser Ile Gln
            290                 295                 300
Asn Val Asn Ile Gln Pro Phe Ile Asp His Leu Pro Gly Glu Lys Asp
305                 310                 315                 320
Thr Thr His Phe Ser Thr Glu Asn Ala Ser Gly Ser Thr Ser Gln Ala
            325                 330                 335
Ala Asn Val Met Glu Ala Leu Glu Ser Gln Ala Ser Leu Leu Leu Ile
            340                 345                 350
Asp Glu Asp Thr Ser Ala Thr Asn Phe Met Ile Arg Asp Gly Arg Met
            355                 360                 365
Gln Arg Leu Ile Ala Pro Glu Lys Glu Pro Ile Thr Pro Phe Ser Asn
            370                 375                 380
Lys Val Lys Ala Leu Tyr Asp Asp His Asn Val Ser Thr Ile Leu Ile
385                 390                 395                 400
Val Gly Gly Ser Gly Asp Tyr Phe Asp Val Ala Asp Gln Val Leu Met
            405                 410                 415
Met Asp Glu Tyr Val Leu Lys Asp Val Thr Gln His Ala Lys Asp Ile
            420                 425                 430
Ala Gln Ser Asp Gly Tyr Gln Arg Arg Leu Ser Ser His Tyr Gln Phe
            435                 440                 445
Gly His Ile Pro Ser Arg Ile Pro Leu Arg Ala Ser Phe Asn Gln Lys
            450                 455                 460
Gly Lys Arg Asp Arg Phe Lys Ala Lys Gly Leu Asn Val Val Thr Tyr
465                 470                 475                 480
Gly Lys Glu Thr Ile His Ile Ser Gly Leu Glu Gln Leu Val Asp Asp
            485                 490                 495
Ser Gln Thr Gln Gly Leu Ala Met Met Leu Ser Tyr Val Lys Asn Glu
            500                 505                 510
Leu Leu Asp Asp Lys Ser Thr Ile Val Glu Leu Thr Asn Ser Leu Tyr
            515                 520                 525
Gln Arg Ile Glu Lys His Gly Leu Asp Val Ile Ser Asn His Gln Gly
            530                 535                 540
His Pro Gly His Leu Ala Leu Pro Arg Lys Gln Glu Phe Ile Ala Thr
545                 550                 555                 560
Leu Asn Arg Tyr Arg Arg Leu Lys Ile Lys Gln Arg Glu
            565                 570
```

```
<210> 5091
<211> 333
<212> PRT
<213> S.epidermidis

<400> 5091
Ile Glu Glu Val Gly Thr Phe Met Phe Lys Lys Ile Ala Thr Ile Ile
1               5                   10                  15
Gly Ser Thr Leu Phe Gly Thr Val Leu Phe Ala Lys Val Lys Glu Lys
            20                  25                  30
Arg Ser Tyr Lys Ser Phe Leu Gln Glu Lys Met Ile Arg Ile Ser Gly
            35                  40                  45
Met Lys Lys Thr Phe Glu Ser Ile Asp Asp Ala Lys Lys Ala Leu Asn
            50                  55                  60
Glu Thr Lys Tyr Gln Thr Ser Gly Lys Tyr Asn Gly Thr Thr Tyr Glu
```

```
65                      70                      75                      80
Phe Lys His Lys Val Gln Ile Arg Asp Tyr Tyr Gly Ser Leu Val Tyr
                85                      90                      95
Val Val Asn Asp His Gly Leu Pro Asp Gln Arg Thr Val Leu Tyr Val
                100                     105                     110
His Gly Gly Ala Trp Phe Gln Asp Pro Leu Glu Asn His Phe Glu Tyr
                115                     120                     125
Leu Asp Leu Leu Val Asp Ala Leu Asp Ala Arg Val Ile Met Pro Val
        130                     135                     140
Tyr Pro Lys Ile Pro His Arg Asp Tyr Arg Thr Thr Phe Glu Leu Leu
145                     150                     155                     160
Thr Lys Ile Tyr Lys Arg Leu Leu Thr Lys Ile Asp Glu Pro Glu Asn
                165                     170                     175
Leu Val Ile Ile Gly Asp Ser Ala Gly Gly Gln Ile Ala Leu Ala Phe
                180                     185                     190
Ala Gln Met Leu Lys Lys Glu Gln Leu Ser Gln Pro Gly His Ile Val
                195                     200                     205
Leu Ile Ser Pro Val Leu Asp Ala Thr Phe Lys Asn Pro Glu Ala Arg
        210                     215                     220
Lys Tyr Glu Lys Glu Asp Pro Met Leu Gly Ile Asp Gly Ser Lys Tyr
225                     230                     235                     240
Leu Val Glu Leu Trp Ala Gly Asp Ala Pro Leu Asp Asp Tyr Lys Met
                245                     250                     255
Ser Pro Met Asn Gly Asp Leu Glu Gly Leu Gly His Ile Thr Leu Thr
                260                     265                     270
Val Gly Thr Lys Glu Thr Leu Tyr Pro Asp Ala Val Lys Phe Ser His
                275                     280                     285
Met Leu Asn Asp Lys Gly Ile Lys His Gln Phe Ile Pro Gly Tyr Asn
        290                     295                     300
Leu Phe His Ile Tyr Pro Leu Phe Pro Ile Pro Glu Arg Gln His Phe
305                     310                     315                     320
Leu Glu Gln Leu Lys Lys Ile Ile Val Thr Lys Glu Leu
                325                     330
```

<210> 5092
<211> 154
<212> PRT
<213> S.epidermidis

<400> 5092

```
Val Ala Arg Val Gly Tyr His Leu Thr Trp Lys Met Ile Leu Gly Leu
1               5                       10                      15
Phe Pro Lys Glu Asp Lys Val Lys Ala Leu Asp Ala Leu Glu Arg Val
                20                      25                      30
Asn Ile Leu Asp Lys Tyr Asp Gln Arg Ser Asp Gln Leu Ser Gly Gly
        35                      40                      45
Gln Gln Gln Arg Ile Ser Ile Ala Arg Ala Leu Cys Gln Glu Pro Thr
        50                      55                      60
Ile Ile Leu Ala Asp Glu Pro Val Ala Ser Leu Asp Pro Leu Thr Thr
65                      70                      75                      80
Lys Gln Val Met Asp Asp Leu Lys Lys Ile Asn Glu Glu Leu Gly Ile
                85                      90                      95
Thr Ile Leu Ile Asn Leu His Phe Val Asp Leu Ala Lys Glu Tyr Gly
                100                     105                     110
Ser Arg Ile Ile Gly Leu Arg Ala Gly Glu Leu Val Tyr Asp Gly Pro
        115                     120                     125
```

```
Ala Ser Glu Thr Asn Asp Glu Val Phe Asn His Ile Tyr Gly Arg Ser
    130                 135                 140
Ile Lys Asn Asp Glu Lys Leu Gly Val Glu
145                 150
```

<210> 5093
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5093
```
Phe Ser Leu Leu Val Phe Ile Lys Leu Tyr Glu Arg Ala Tyr Phe Phe
1           5                   10                  15
Lys Tyr Phe Gly Glu Thr Leu Glu Gly Thr Gly Gln Ala Glu Asp Tyr
            20                  25                  30
Arg Leu Lys Leu Ser Pro Lys Lys Ala Ser Gln Gln Tyr Glu Val Leu
        35                  40                  45
```

<210> 5094
<211> 474
<212> PRT
<213> S.epidermidis

<400> 5094
```
Asn Phe Leu Phe Leu Met Gln Met Lys Leu Gly Trp His Asn Val Leu
1           5                   10                  15
Leu Val Lys Gly Gly Ile Tyr Tyr Met Ser Lys Ser Tyr Asp Leu Ile
            20                  25                  30
Val Ile Gly Ala Gly Pro Gly Gly Tyr Val Ala Ala Ile Arg Gly Ala
        35                  40                  45
Gln Leu Gly Lys Asn Val Ala Val Ile Glu Lys Asn Asn Ala Gly Gly
    50                  55                  60
Thr Cys Leu Asn Val Gly Cys Ile Pro Ser Lys Thr Leu Leu Glu His
65                  70                  75                  80
Gly Glu Lys Ala His Ser Ile Arg Val Ala Asn Asp Trp Gly Ile Thr
                85                  90                  95
Thr Lys Asp Leu Lys Ile Asp Phe Thr Gln Phe Val Gln Arg Lys Lys
            100                 105                 110
Lys Val Val Gln Thr Leu Thr Gly Gly Val Lys Gln Leu Leu Lys Lys
            115                 120                 125
Asn Lys Val Thr Tyr Ile Glu Gly Glu Ala Arg Ile Ser Lys Asn Leu
        130                 135                 140
Lys Val Asp Val Asn Asn Glu Thr Tyr Gln Ala Lys Asp Ile Ile Leu
145                 150                 155                 160
Ala Thr Gly Ser Gln Pro Phe Ile Pro Pro Ile Asp Gly Leu Asp Gln
                165                 170                 175
Val Asn Tyr Glu Thr Thr Asp Thr Phe Phe Asp Leu Glu Lys Leu Pro
            180                 185                 190
Lys Gln Leu Ala Val Ile Gly Gly Gly Val Ile Ala Thr Glu Leu Ala
            195                 200                 205
Ser Ser Met Ala Asp Leu Gly Val Arg Val Thr Ile Ile Glu Val Ala
        210                 215                 220
Asp Asp Ile Leu Leu Thr Glu Ile Asn Glu Thr Arg Glu Met Leu Lys
225                 230                 235                 240
Ala His Leu Asp Asn Gln Gly Ile Lys Ile Leu Thr Lys Ala Lys Ile
                245                 250                 255
```

```
Lys Gln Val Lys Glu Ser Lys Ile Ile Leu Asp Gly Gln Asp Asp Val
            260                 265                 270
Ser Phe Asp Thr Leu Leu Val Ala Thr Gly Arg Gln Pro Asn Thr Gln
            275                 280                 285
Val Ala Lys Asp Leu Asn Leu Glu Met Asp Gly Lys Phe Phe Lys Val
            290                 295                 300
Asn Glu His Tyr Glu Thr Ser Gln Lys His Val Tyr Ala Ile Gly Asp
305                 310                 315                 320
Leu Ile Lys Gly Tyr Gln Leu Ala His Ala Ala Ser Ala His Gly Ile
            325                 330                 335
His Val Val Glu Thr Ile Met Asn Lys Gln Pro Ser Leu Val Arg Gln
            340                 345                 350
Glu Asp Ile Thr Arg Cys Ile Tyr Thr Arg Leu Glu Ala Ala Ser Val
            355                 360                 365
Gly Leu Ser Glu Glu Gln Ala Lys Glu Ala Gly Tyr Asp Val Lys Val
            370                 375                 380
Thr Gln Ser Ala Phe Gln Gly Asn Ala Lys Ala Leu Ile Lys Gly Glu
385                 390                 395                 400
Asn Glu Gly Phe Ile Lys Leu Val Val Asp Lys Lys Tyr Gly Glu Val
            405                 410                 415
Leu Gly Ala Phe Ile Val Gly Pro His Ala Thr Asp Ile Ile Gly Glu
            420                 425                 430
Leu Leu Ser Val Lys Ala Ser Glu Gly Thr Ile His Glu Leu Ser Gln
            435                 440                 445
Ile Ile Gln Pro His Pro Ala Leu Leu Glu Ala Ile Gly Glu Ser Ala
            450                 455                 460
Asp Ala Phe Phe Asp Ser Ala Ile His Met
465                 470
```

<210> 5095
<211> 160
<212> PRT
<213> S.epidermidis

<400> 5095
```
Ile Leu Leu Leu Leu Leu Ser Leu Asn Lys Tyr Ile Phe Trp Glu Lys
1                   5                   10                  15
Glu Met Lys Phe Lys Lys Leu Leu Ser Arg Ile Ile Ile Ala Thr Met
            20                  25                  30
Ile Thr Phe Thr Gly Thr Leu Ser Tyr Gln Ala Ile Glu Gln Thr His
            35                  40                  45
Ile Ser His Ala Ala His Asn Tyr Tyr Gly Lys Lys Gln Cys Thr Trp
            50                  55                  60
Trp Ala Phe Lys Arg Arg Ala Gln Leu Gly Lys Pro Val Ser Asn Arg
65                  70                  75                  80
Trp Gly Asn Ala Lys Asn Trp Tyr Ser Asn Ala Arg Arg Ser Gly Tyr
            85                  90                  95
Ala Thr Gly His Lys Pro Arg Lys Tyr Ala Val Met Gln Ser Thr Arg
            100                 105                 110
Gly Tyr Tyr Gly His Val Ala Val Val Glu Lys Val Tyr Lys Asn Gly
            115                 120                 125
Lys Ile Lys Ile Ser Glu Tyr Asn Tyr Asn Val Pro Leu Gly Tyr Gly
            130                 135                 140
Thr Arg Ile Ile Ser Lys Ser Ser Ala Arg Asn Tyr Asn Tyr Ile Tyr
145                 150                 155                 160
```

<210> 5096
<211> 419
<212> PRT
<213> S.epidermidis

<400> 5096
Glu Cys Leu Leu Thr Met Leu Ser Ala Gln Gln Phe Leu Lys Glu Phe
1   5   10   15
Asn Asn Val Glu Ser Leu Asp Glu Ser Leu Tyr Glu Ile Val Ser Gln
            20   25   30
Ile Cys Glu Glu Val Lys Leu Gln Gly Asp Lys Ala Leu Lys Asn Tyr
            35   40   45
Asn Leu Gln Phe Asp Gln Val Glu Thr Glu Lys Leu Glu Leu Glu Gln
        50   55   60
Ser Gln Leu Lys Asn Ala Tyr Asp Met Leu Asp Asn Glu Thr Arg Asp
65   70   75   80
Ala Leu Glu Gln Ser Tyr Gln Arg Ile Lys Val Tyr Gln Glu Asn Ile
                85   90   95
Lys Val Lys Gln Glu Ser Ser Gln Gln Thr Glu Cys Tyr Glu Arg Tyr
            100   105   110
His Pro Ile Glu Arg Val Gly Ile Tyr Val Pro Gly Gly Lys Ala Ser
            115   120   125
Tyr Pro Ser Thr Val Leu Met Thr Ala Thr Leu Ala Gln Val Ala Gly
        130   135   140
Val Asn Glu Ile Thr Val Val Thr Pro Pro Gln Asn Ser Gly Ile Cys
145   150   155   160
Gln Glu Val Leu Ala Ala Cys Tyr Ile Thr Gly Val His His Val Tyr
                165   170   175
Gln Val Gly Gly Ala Gln Ser Ile Ala Ala Leu Thr Tyr Gly Thr Glu
            180   185   190
Thr Ile Lys Lys Val Asp Lys Ile Val Gly Pro Gly Asn Gln Tyr Val
            195   200   205
Ala Tyr Ala Lys Lys Phe Val Phe Gly Gln Val Gly Ile Asp Gln Ile
        210   215   220
Ala Gly Pro Thr Glu Ile Ala Leu Ile Ile Asp Glu Ser Ala Asp Leu
225   230   235   240
Asp Ala Ile Ala Tyr Asp Val Phe Ala Gln Ala Glu His Asp Glu Met
                245   250   255
Ala Cys Thr Tyr Val Ile Ser Glu Asn Glu Lys Val Leu Asn Gln Leu
                260   265   270
Asn Thr Ile Ile Gln Glu Lys Leu Gln Tyr Val Glu Arg Gln Asp Ile
            275   280   285
Ile Ser Gln Ser Ile Ala Asn His His Tyr Leu Ile Leu Ala Gln Asp
            290   295   300
Thr Glu Glu Ala Cys Leu Ile Met Asn Thr Ile Ala Pro Glu His Ala
305   310   315   320
Ser Ile Gln Thr Arg Ala Pro Glu Met Tyr Ile Asp Lys Val Lys Tyr
                325   330   335
Val Gly Ala Leu Phe Leu Gly His Phe Ser Pro Glu Val Ile Gly Asp
            340   345   350
Tyr Val Ala Gly Pro Ser His Val Leu Pro Thr Asn Gln Thr Ala Arg
            355   360   365
Phe Thr Asn Gly Leu Ser Val Asn Asp Phe Met Thr Arg His Ser Val
        370   375   380
Ile His Leu Ser Gln Lys Thr Phe Asn Glu Val Ala Glu Ser Ala Glu
385   390   395   400

```
Tyr Ile Ala His Ile Glu Ser Leu Phe Asn His Glu Lys Ser Ile His
                405                 410                 415
Val Arg Arg
```

<210> 5097
<211> 74
<212> PRT
<213> S.epidermidis

<400> 5097
```
Gly Glu Ile Leu Ser Phe Tyr Glu Phe Met Gln Asn Phe Leu Gly Asp
1               5                   10                  15
Asp Thr Pro Leu Gly Glu Leu Val Asp Trp Ile Asn Gln Asp Ile Asn
            20                  25                  30
Phe Pro Lys Asp Val Thr Ser Gln Lys Glu Ile Leu Thr Tyr Phe Arg
        35                  40                  45
Asn His Pro Cys Pro Glu Asn Ile Pro Val Thr Ser Ile Lys Arg Ala
    50                  55                  60
Leu Ala Val Phe Asn Gln Phe Thr Lys Val
65                  70
```

<210> 5098
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5098
```
Gln Tyr Val Leu Lys Asn His Leu His Val Asp Lys Met Asn Trp Leu
1               5                   10                  15
Ile Leu Ile Ile Asn Ile Ile Ala Gln Lys Ile Asn Ile Leu Ser Lys
            20                  25                  30
Asn Ser Glu Lys Leu Thr Lys Ile Ile Phe Leu Ser Asp
        35                  40                  45
```

<210> 5099
<211> 122
<212> PRT
<213> S.epidermidis

<400> 5099
```
Glu Glu Ser Leu Met Val Leu Arg Tyr Ala Thr Asn Leu Lys Leu Ala
1               5                   10                  15
Lys Glu Leu Tyr Asp Ala Ser Lys Pro Lys Leu Lys Gly Asp Gln Gly
            20                  25                  30
Met Ile Asp Thr Phe Thr Asn Thr Phe Gly Leu Pro Glu Asn Ser Val
        35                  40                  45
Lys Leu Ala Gly Gly Val Glu Ala Ala Ala Ala Gly Leu Phe Ala Ala
    50                  55                  60
Ser Phe Leu Asn Lys Asn Ile Ser Arg Leu Gly Ser Leu Ala Ala Ile
65                  70                  75                  80
Ser Val Leu Gly Val Ala Ala Tyr Lys His Phe Glu Ala Gly His Gly
            85                  90                  95
Lys Lys Gly Ala Gln His Ala Leu Asp Leu Leu Gly Leu Ser Thr Leu
        100                 105                 110
Ser Leu Leu Asp Thr Phe Ser Cys Lys Lys
```

                    115   120

<210> 5100
<211> 66
<212> PRT
<213> S.epidermidis

<400> 5100
Ser Asn Ser Leu Ile Cys Leu Ala Cys Pro Ser Val Lys Gly Leu Leu
1   5   10   15
Val Thr Leu Lys Phe Asn Leu Ile His Leu Leu Tyr Phe Val Ile Pro
            20   25   30
Ile Phe Val Ile Val Tyr Ile Cys Leu Phe Leu Lys Val Ile Asn Tyr
            35   40   45
Ile Phe Asn Ser Ser Met Tyr His Leu Leu Phe Ser Val Asn Val Ile
        50   55   60
Leu Asn
65

<210> 5101
<211> 50
<212> PRT
<213> S.epidermidis

<400> 5101
Ser Glu Ser Leu Leu Phe Glu His Pro Thr Arg Ala Ile Asp Ile Thr
1   5   10   15
Ile Asn Lys Ile Pro Gln Asn Phe Phe Ile Phe Tyr Leu Leu Leu Ile
            20   25   30
Phe Ile Tyr Arg Glu Ile Thr Ile Lys Tyr Tyr Leu Val Leu Asn Cys
            35   40   45
Tyr Leu
        50

<210> 5102
<211> 84
<212> PRT
<213> S.epidermidis

<400> 5102
Gly Thr Pro Leu Glu Leu Val Phe Val Asn Thr Leu Gly Pro Lys Pro
1   5   10   15
Cys Phe Ala Lys Pro Asn Lys Ile Leu Leu Leu Glu Tyr Ile Pro Leu
            20   25   30
Phe Val Ala Asp Ala Ala Ala Val Lys Thr Thr Lys Leu Thr Met Pro
            35   40   45
Ala Ala Lys Gly Thr Pro Ile Ser Val Asn Asn Leu Thr Asn Gly Leu
        50   55   60
Leu Ser Gly Ser Thr Leu Asn His Gly Met Thr Asp Met Ile Thr Ser
65   70   75   80
Lys Pro Pro Ile

<210> 5103
<211> 48
<212> PRT

<213> S.epidermidis

<400> 5103
Phe Val Thr Phe Asn His Arg Ile Leu Leu Thr Glu Leu Gly Leu Ser
1   5   10   15
Ser Arg Thr Val Leu Gln Thr Ser Ile Asn Val Gly Ile Trp Cys Val
            20   25   30
Val Cys Met Tyr Asn Trp Asn Ser Tyr Trp Tyr Phe His Ser Gln Val
            35   40   45

<210> 5104
<211> 169
<212> PRT
<213> S.epidermidis

<400> 5104
Val Asn Thr Phe Ala Leu Gly Ser Glu Asp Met Glu Thr Val Tyr Phe
1   5   10   15
Ala Gly Gly Cys Leu Trp Gly Thr Gln Ala Phe Phe Asn Thr Ile Pro
            20   25   30
Gly Val Ile Gln Thr Glu Ala Gly Arg Ala Asn Gly Thr Ser Lys Cys
            35   40   45
Leu Asp Ala Pro Tyr Asp Gly Tyr Ala Glu Cys Val Lys Ile His Phe
        50   55   60
Asp Pro Ala Lys Thr Ser Ile Leu Met Leu Met Asp Tyr Leu Phe Glu
65   70   75   80
Met Ile Asn Pro Tyr Ser Leu Asn Gln Gln Gly Gln Asp Lys Gly Gln
                85   90   95
Lys Tyr Arg Thr Gly Val Tyr Ser Glu Ser Ser Lys His Leu Asn Glu
            100   105   110
Ala Lys Asp Tyr Ile Lys Arg Arg Glu Asp Ala Lys Gln Val Met Val
            115   120   125
Glu Val Gln Pro Leu Ser Asn Tyr Val Lys Ser Ala Glu Glu His Gln
        130   135   140
Asn His Leu Glu Lys Phe Pro Glu Asp Tyr Tyr Leu Cys His Val Pro
145   150   155   160
Pro Ala Leu Leu Asn Lys Tyr Lys Lys
                165

<210> 5105
<211> 108
<212> PRT
<213> S.epidermidis

<400> 5105
Ile Gln Thr Leu Ser Trp Leu Asn Ile Arg Lys Val Thr Ala Gln Arg
1   5   10   15
Gly Glu Asn His Gln Lys Asn Tyr Lys Lys Asp Asn Phe Tyr Ile Ile
            20   25   30
Ser Ile Glu Ile Val Phe Ile Tyr Leu Ser Trp Thr Phe Leu Ser Gln
        35   40   45
Ala His Leu Tyr Ile Tyr Ile Val Phe Trp Met Asn Arg Met Met Ala
        50   55   60
Ile Thr Thr Met Thr Ile Ile Glu Thr Lys Asp Lys Ile Leu Lys Cys
65   70   75   80
Leu Leu Phe Val Ser Leu Leu Asp Ser Pro Phe Ser Ile Ile Ser Cys

```
                      85                    90                      95
Ser Ser Arg Ser Ile Ser Arg Ser Lys Ser Val Phe
            100                   105


<210> 5106
<211> 42
<212> PRT
<213> S.epidermidis


<400> 5106
Ile Gln Thr Leu Ser Trp Leu Asn Ile Arg Lys Val Thr Ala Gln Arg
1               5                   10                  15
Ala Glu Asn His Gln Lys Asn Tyr Lys Lys Asp Asn Ser Tyr Ile Ile
            20                  25                  30
Ser Ile Glu Ile Val Phe Phe Tyr Leu Ser
            35                  40


<210> 5107
<211> 317
<212> PRT
<213> S.epidermidis


<400> 5107
Ser Phe Gln Phe Ile Ser Pro Ser Ile Ser Phe Ile Ile Ser Asn Ser
1               5                   10                  15
Ile Met Asn Arg Lys Lys Lys Gly Lys Asn Lys Val Met Thr Ile Ala
            20                  25                  30
Ile Ile Gly Pro Gly Ala Val Gly Thr Thr Leu Ala Phe Glu Leu Lys
            35                  40                  45
Lys Val Leu Pro Asp Thr Glu Leu Ile Gly Arg Gln Asp Lys Leu Met
            50                  55                  60
Thr Tyr Phe Pro Glu Asn Thr Ser Asn Gly Ser Asn Val Lys Val Thr
65                  70                  75                  80
Ser Phe Asn His Ile Asn Gln Thr Phe Asp Val Ile Ile Ile Ala Val
                85                  90                  95
Lys Thr His Gln Leu Asp Asp Val Ile Lys Gln Leu Pro Lys Ile Thr
            100                 105                 110
His Asp Asp Ser Leu Ile Ile Leu Ala Gln Asn Gly Tyr Gly Gln Leu
            115                 120                 125
Asn Lys Leu Pro Tyr Gln His Val Phe Gln Ala Val Val Tyr Ile Ser
            130                 135                 140
Gly Gln Lys Val Asn Asn Asn Val Gln His Phe Arg Asp Tyr Gln Leu
145                 150                 155                 160
Tyr Ile Gln Asp Ser Thr Leu Thr Arg Gln Phe Lys Gln Met Val His
                165                 170                 175
Pro Ser Lys Ile Glu Val Val Leu Gln Glu Asn Ile Glu Lys Ser Ile
            180                 185                 190
Trp Tyr Lys Leu Leu Val Asn Leu Gly Ile Asn Thr Ile Thr Ala Ile
            195                 200                 205
Gly Gln Gln Pro Ala Lys Ile Leu Lys Ser Pro His Ile Glu Ser Leu
            210                 215                 220
Cys Arg Arg Ile Leu Val Asp Gly Leu Lys Val Ala Arg Ala Glu Gln
225                 230                 235                 240
Ile Asp Phe Glu Asp His Ile Val Asp Asp Ile Leu Asn Ile Tyr Lys
                245                 250                 255
Gly Tyr Pro Asp Glu Met Gly Thr Ser Met Tyr Tyr Asp Val Ile Asn
```

```
              260                     265                     270
Lys His Pro Leu Glu Val Glu Ala Ile Gln Gly Tyr Ile Tyr Lys Cys
         275                     280                     285
Ala Lys Lys His His Leu Glu Thr Pro Tyr Leu Asp Met Ala Tyr Thr
         290                     295                     300
Phe Leu Tyr Ala Tyr His Leu Glu Tyr Thr Gln Pro Asp
305                     310                     315


<210> 5108
<211> 43
<212> PRT
<213> S.epidermidis


<400> 5108
Ser Pro Gln Phe Lys Tyr Lys His Ile Leu Arg Ile His Leu Ser Asp
1               5                   10                  15
Met Glu Tyr Asn Tyr Asn Ile Val Ser Phe Asp Thr Lys Ile Leu Met
              20                  25                  30
Ile Asn His Leu Met Leu Val Leu Met Arg Ile
         35                  40


<210> 5109
<211> 61
<212> PRT
<213> S.epidermidis


<400> 5109
Lys Arg Gln Phe Leu His Tyr Phe Asn Arg Asn Cys Leu Tyr Leu Leu
1               5                   10                  15
Ile Leu Glu Leu Ser Val Pro Ala Thr Leu Leu Ile Ile Thr Lys Phe
              20                  25                  30
Leu Asn Thr Met Phe Cys Tyr Arg Asp Val Gly Met Phe Tyr Ser Phe
         35                  40                  45
Glu Lys Arg Leu Tyr Val Ala Ile Asn Lys Val Thr Asp
   50                  55                  60


<210> 5110
<211> 267
<212> PRT
<213> S.epidermidis


<400> 5110
Leu Phe Lys Phe Leu Gly Gly Tyr Leu Thr Met Lys Lys Ile Ala Thr
1               5                   10                  15
Ala Thr Ile Ala Thr Ala Gly Ile Ala Thr Phe Ala Phe Ala His His
              20                  25                  30
Asp Ala Gln Ala Ala Glu Gln Asn Asn Asp Gly Tyr Asn Pro Asn Asp
         35                  40                  45
Pro Tyr Ser Tyr Ser Tyr Thr Tyr Thr Ile Asp Ala Glu Gly Asn Tyr
   50                  55                  60
His Tyr Thr Trp Lys Gly Asn Trp Ser Pro Asp Arg Val Asn Thr Ser
65                  70                  75                  80
Tyr Asn Tyr Asn Asn Tyr Asn Asn Tyr Asn Tyr Tyr Gly Tyr Asn Asn
              85                  90                  95
Tyr Ser Asn Tyr Asn Asn Tyr Ser Asn Tyr Asn Asn Tyr Asn Asn Tyr
         100                 105                 110
```

```
Gln Ser Asn Asn Thr Gln Ser Gln Arg Thr Thr Gln Pro Thr Gly Gly
        115                 120                 125
Leu Gly Ala Ser Tyr Ser Thr Ser Ser Ser Asn Val His Val Thr Thr
        130                 135                 140
Thr Ser Ala Pro Ser Ser Asn Gly Val Ser Leu Ser Asn Ala Arg Ser
145                 150                 155                 160
Ala Ser Gly Asn Leu Tyr Thr Ser Gly Gln Cys Thr Tyr Tyr Val Phe
                165                 170                 175
Asp Arg Val Gly Gly Lys Ile Gly Ser Thr Trp Gly Asn Ala Asn Asn
        180                 185                 190
Trp Ala Asn Ala Ala Ala Arg Ser Gly Tyr Thr Val Asn Asn Ser Pro
        195                 200                 205
Ala Lys Gly Ala Ile Leu Gln Thr Ser Gln Gly Ala Tyr Gly His Val
        210                 215                 220
Ala Tyr Val Glu Gly Val Asn Ser Asn Gly Ser Ile Arg Val Ser Glu
225                 230                 235                 240
Met Asn Tyr Gly His Gly Ala Gly Val Val Thr Ser Arg Thr Ile Ser
                245                 250                 255
Ala Ser Gln Ala Ala Ser Tyr Asn Tyr Ile His
        260                 265
```

<210> 5111
<211> 53
<212> PRT
<213> S.epidermidis

<400> 5111
```
Phe Pro Phe Ser Ile Ser Ser Pro Ser His Phe Asn Lys Phe Ile Leu
1               5                   10                  15
Ile Leu Thr Asn Val Tyr Val Phe Ile His Pro Asn Tyr Cys Glu Lys
                20                  25                  30
Cys Ser Ala Tyr Val Tyr Lys Ile Tyr Ser Leu Asn Lys Ser Trp Phe
        35                  40                  45
Thr Tyr Leu Ile Tyr
        50
```

<210> 5112
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5112
```
Leu Arg Phe Ser Phe Thr Phe Ala Asn Lys Thr Val Pro Asn Asn Val
1               5                   10                  15
Glu Pro Ile Ile Val Ala Ile Phe Leu Asn Met Asn Val Pro Thr Ser
                20                  25                  30
Ser Ile Tyr Asn His Phe Lys Pro Ser Ala Ser Lys Arg
        35                  40                  45
```

<210> 5113
<211> 70
<212> PRT
<213> S.epidermidis

<400> 5113
```
Trp Pro Lys Phe Leu Gly Asn Gln Asn Ile Gln Val His Gln Thr Ala
```

```
1                   5                   10                  15
Asn Asn Arg Phe Leu Lys Glu Ser Cys Tyr Leu Leu Gly Asn Asn Ile
            20                  25                  30
Ser Met Gly Thr Leu Arg Gln Glu Ser Cys Asp Ser Cys Leu Ser Phe
            35                  40                  45
Ile Phe Leu Gly Lys His Leu Thr Tyr Ser Asn Asp Asn Gln Tyr Lys
        50                  55                  60
Phe Asn Lys Tyr Thr Ile
65                  70
```

<210> 5114
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5114
```
Lys Cys Glu Leu Arg Trp Tyr Leu Asn Arg Leu Ser Arg Cys Val Ser
1                   5                   10                  15
Phe Val Ser Leu His Ile Met Glu Val Glu Arg Ser Asn Cys Ile Ala
            20                  25                  30
Ile Leu Met Lys Val Glu Gly Val Ile Val Lys Ser Val Ile His Ile
            35                  40                  45
Tyr Asp Asn Met Glu Leu Cys
        50                  55
```

<210> 5115
<211> 510
<212> PRT
<213> S.epidermidis

<400> 5115
```
Ala Ile Thr Ser Asn Ile Thr Lys Lys Gly Trp Val Leu Met Thr Asn
1                   5                   10                  15
Ile Asn Val Arg Asn Tyr Ile Asp Glu Ser Tyr Gly Leu Phe Ile Asn
            20                  25                  30
Asn Glu Phe Gln Ala Ser Asp Ser Gly Glu Thr Leu Thr Val Ser Asn
            35                  40                  45
Pro Ala Asn Gly Glu Asp Leu Ala Lys Val Ala Arg Ala Gly Lys Lys
        50                  55                  60
Asp Val Asp Lys Ala Val Gln Ala Ala His Asp Ala Phe Asp Ser Trp
65                  70                  75                  80
Ser Lys Ile Ser Lys Glu Glu Arg Ala Asp Tyr Leu Leu Glu Ile Ser
                85                  90                  95
Arg Arg Ile His Glu Lys Thr Glu His Leu Ala Thr Val Glu Ser Leu
            100                 105                 110
Gln Asn Gly Lys Pro Tyr Arg Glu Thr Ser Thr Ile Asp Val Pro Gln
            115                 120                 125
Ala Ala Asn Gln Phe Lys Tyr Phe Ala Ser Val Leu Thr Thr Asp Glu
        130                 135                 140
Gly Ser Val Asn Glu Ile Asp Gln Asn Thr Met Ser Leu Val Val Asn
145                 150                 155                 160
Glu Pro Val Gly Val Val Gly Thr Val Val Ala Trp Asn Phe Pro Ile
            165                 170                 175
Leu Leu Ala Ser Trp Lys Leu Gly Pro Ala Leu Ala Ala Gly Asn Thr
            180                 185                 190
Val Val Ile Gln Pro Ser Ser Ser Thr Pro Leu Ser Leu Ile Glu Leu
```

```
            195                     200                     205
Ala Lys Ile Phe Gln Glu Val Leu Pro Lys Gly Val Val Asn Val Leu
    210                     215                     220
Thr Gly Lys Gly Ser Glu Ser Gly Asp Ala Ile Phe His His Glu Gly
225                     230                     235                     240
Val Asp Lys Leu Ser Phe Thr Gly Ser Thr Asp Val Gly Tyr Gly Val
                245                     250                     255
Ala Gln Ala Gly Ala Glu Arg Ile Val Pro Thr Thr Leu Glu Leu Gly
                260                     265                     270
Gly Lys Ser Ala Asn Ile Ile Phe Asp Asp Ala Asn Leu Glu Gln Val
                275                     280                     285
Ile Glu Gly Val Gln Leu Gly Ile Leu Phe Asn Gln Gly Glu Val Cys
    290                     295                     300
Ser Ala Gly Ser Arg Leu Leu Val Gln Ser Ser Ile Tyr Asn Glu Leu
305                     310                     315                     320
Leu Pro Lys Leu Lys Glu Ala Phe Glu Asn Ile Lys Val Gly Asp Pro
                325                     330                     335
Phe Asp Glu Asp Thr Lys Met Ser Ala Gln Thr Gly Pro Glu Gln Leu
                340                     345                     350
Asp Lys Ile Glu Ser Tyr Ile Lys Ile Ala Glu Glu Asp Asp Lys Ala
                355                     360                     365
Asn Ile Leu Thr Gly Gly His Arg Ile Thr Asp Asn Gly Leu Asp Lys
    370                     375                     380
Gly Tyr Phe Phe Glu Pro Thr Ile Ile Glu Ile Asn Asp Asn Lys His
385                     390                     395                     400
Gln Leu Ala Gln Glu Glu Ile Phe Gly Pro Val Val Val Val Glu Lys
                405                     410                     415
Phe Asp Asp Glu Gln Glu Ala Ile Glu Ile Ala Asn Asp Ser Glu Tyr
                420                     425                     430
Gly Leu Ala Gly Gly Ile Phe Thr Thr Asp Ile His Arg Ala Leu Asn
                435                     440                     445
Val Ala Lys Ala Met Arg Thr Gly Arg Ile Trp Ile Asn Thr Tyr Asn
    450                     455                     460
Gln Ile Pro Ala Gly Ala Pro Phe Gly Gly Tyr Lys Lys Ser Gly Ile
465                     470                     475                     480
Gly Arg Glu Val Tyr Lys Asp Ala Ile Lys Asn Tyr Gln Gln Val Lys
                485                     490                     495
Asn Ile Phe Ile Asp Thr Ser Asn Gln Thr Lys Gly Leu Tyr
                500                     505                     510
```

```
<210> 5116
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5116
Leu Leu Tyr Ser Cys Asn Asn Lys Phe Cys Tyr Tyr Tyr Asn Phe Ser
1                   5                   10                      15
Phe Asp Glu Phe Asn Leu Ser Phe Lys Tyr Leu Ala Asn Lys Glu Tyr
                20                      25                      30
Leu Leu Asp Val Asn Leu Ile Leu Asp Ile Val Lys Ile Val His Lys
        35                      40                      45
Ile Asp Lys Lys
    50


<210> 5117
```

<211> 44
<212> PRT
<213> S.epidermidis

<400> 5117
Tyr Thr His Ser Ile Lys Arg Leu Gln Tyr Phe Leu Lys Ile Leu His
1   5   10   15
Lys Lys Thr Arg Leu Leu Arg Val Glu Phe Leu Lys Met Tyr Tyr Tyr
            20   25   30
Lys Lys Arg Leu Ala Ala Thr Glu Ile Gly Gly Ile
        35   40

<210> 5118
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5118
Leu Lys Glu Leu Asn Thr Thr Phe Gly Asp Lys Gln Arg Gly Gln Val
1   5   10   15
Thr Asn Glu Ile Leu Asn Glu Ser Lys Lys Asp Ile Pro Asn Ser Tyr
            20   25   30
Ile Thr Tyr Asn Ser Gln Ile Asp Gly Val Asn Asn Lys Val Arg His
        35   40   45
Phe Asn Val Thr Pro Glu Ser Ile Tyr Leu Ile Asp Tyr Lys Leu Ser
    50   55   60
Lys Lys Glu
65

<210> 5119
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5119
Asn Thr Asn Ser Ile Ala Phe Leu Glu Phe Ile Ile Leu Ala Leu Tyr
1   5   10   15
Phe Ser Asp Lys Ile Ile Tyr Ser Asn Thr Ser Ser Ser Ser Leu Ile
            20   25   30
Leu Ile Val Leu Asn Phe Asn Asn Arg Ile Lys Val Asn Tyr
        35   40   45

<210> 5120
<211> 88
<212> PRT
<213> S.epidermidis

<400> 5120
Thr Asp Tyr Ser Ser Ile Ile Phe Asp Ala Leu Thr Val Asp Lys Lys
1   5   10   15
Gly Cys Leu Tyr Thr Pro Asn His Ser Gln Tyr Val Glu Glu Arg Gly
            20   25   30
Val Tyr Gln Asp Val Met Asp Thr Leu Lys Pro Ile Trp Tyr Thr Asp
        35   40   45
Ala Glu Leu Leu Ile Asn Asp Leu Ile Thr Asp Ser Ile Pro Gln Leu
    50   55   60

Asn Asn Lys Tyr Thr Asn Lys Asn Asn Gln Ser Phe Glu Tyr Ile Ser
65   70   75   80
Lys Leu Ile Ser Asn Gln Leu Lys
                85

<210> 5121
<211> 340
<212> PRT
<213> S.epidermidis

<400> 5121
Phe Asn Ser Ser Leu Glu Glu Cys Arg Asn Met Val Glu Lys Phe Lys
1   5   10   15
Ala Phe Val Val Asp Gln Asp Asp Asn Gly Ile Val Ser Asn Ser Tyr
            20   25   30
Lys Glu Leu Thr Lys Asp Asp Leu Pro Glu Gly Asp Val Leu Ile Lys
        35   40   45
Val His Tyr Ser Gly Ile Asn Tyr Lys Asp Ala Leu Ala Thr Gln Asp
        50   55   60
His Asn Lys Ile Val Lys Gln Tyr Pro Met Val Pro Gly Ile Asp Leu
65   70   75   80
Ala Gly Thr Ile Glu Glu Thr Asn Ala Pro Gly Phe Glu Val Gly Asp
                85   90   95
Lys Val Ile Val Thr Ser Tyr Asp Leu Gly Val Ser His Tyr Gly Gly
            100   105   110
Phe Ser Glu Tyr Ala Arg Val Lys Ser Glu Trp Val Ile Glu Leu Pro
        115   120   125
Glu Asp Leu Thr Leu Glu Glu Ala Met Ile Tyr Gly Thr Ala Gly Tyr
        130   135   140
Thr Ala Gly Leu Ala Ile Glu Gln Leu Glu Lys Ser Gly Met Ser Ile
145   150   155   160
Glu Gly Lys Glu Val Leu Val Arg Gly Ala Thr Gly Gly Val Gly Thr
            165   170   175
Ile Ser Leu Leu Met Leu Asn Asn Leu Gly Tyr Asp Val Ile Ala Ser
            180   185   190
Thr Gly Arg Asp Asp Ala Glu Glu Lys Leu Lys Lys Leu Gly Ala Lys
        195   200   205
Glu Val Ile Gly Arg Leu Pro Glu Asp Asn Ser Lys Pro Leu Glu Lys
    210   215   220
Arg Thr Trp Gln Ala Ala Ile Asp Pro Val Gly Gly Glu Asn Leu Pro
225   230   235   240
Tyr Ile Val Lys Arg Leu Asp Asn Asn Gly Ser Val Ala Leu Ile Gly
            245   250   255
Met Thr Gly Gly Asn Asn Phe Glu Thr Thr Val Phe Pro Phe Ile Leu
            260   265   270
Arg Gly Ala Ser Ile Ile Gly Ile Asp Ser Val Phe Thr Pro Ile Lys
        275   280   285
Leu Arg Lys Arg Val Trp Arg Arg Leu Ala Lys Asp Leu Lys Pro Gln
        290   295   300
Gln Leu His Asp Ile Lys His Val Ile Ser Phe Asp Glu Ile Pro Lys
305   310   315   320
Ala Ile Asp Gln Val Ile Asn His Asn Asn Thr Gly Arg Ile Val Ile
            325   330   335
Asp Phe Asn Val
        340

<210> 5122
<211> 295
<212> PRT
<213> S.epidermidis

<400> 5122

```
Phe Glu Met Ser Ala Gln Asp Pro Arg Asn Lys Phe Lys Thr Asp Asn
1               5                   10                  15
Tyr Glu Lys Gln Glu Gln Glu Val Pro Gly Ile Gln Ala Lys Met Ser
            20                  25                  30
Pro Gln Pro Asp Cys Gly Glu Asp Ser Tyr His Gly His His Arg Leu
            35                  40                  45
Asp Gly Phe Lys Ile Leu Val Thr Gly Gly Asp Ser Ala Ile Gly Arg
        50                  55                  60
Ala Ala Ala Ile Ala Tyr Ala Lys Glu Gly Ala Asp Val Ala Ile Asn
65                  70                  75                  80
Tyr Leu Pro Ser Glu Gln Gln Asp Ala Asp Asp Val Lys Gln Ile Ile
                85                  90                  95
Glu Asn Val Gly Gln Lys Ala Ile Leu Ile Pro Gly Asp Ile Arg Asp
                100                 105                 110
Glu Gln Phe Asn Tyr Asp Met Val Glu Lys Ala Tyr Gln Gln Leu Gly
            115                 120                 125
Gly Leu Asp Asn Val Thr Leu Val Ala Gly His Gln Leu Tyr Gln Asp
            130                 135                 140
Glu Leu Ser Glu Phe Lys Thr Gln Asp Phe Thr Glu Thr Phe Glu Thr
145                 150                 155                 160
Asn Val Tyr Pro Val Phe Trp Thr Val Gln Lys Ala Leu Glu Tyr Leu
                165                 170                 175
Gln Pro Gly Gly Ser Ile Thr Thr Thr Ser Ser Val Gln Gly Tyr Asn
                180                 185                 190
Pro Ser Pro Ile Leu His Asp Tyr Ala Ala Thr Lys Ala Ala Ile Ile
            195                 200                 205
Ser Leu Thr Lys Ser Phe Ser Ala Glu Leu Gly Pro Lys Gly Ile Arg
        210                 215                 220
Val Asn Cys Val Ala Pro Gly Pro Phe Trp Ser Pro Leu Gln Ile Val
225                 230                 235                 240
Gly Gly Gln Pro Gln Ser Ala Ile Pro Thr Phe Gly Gln Asn Thr Pro
                245                 250                 255
Leu Gly Arg Ala Gly Gln Pro Val Glu Cys Ala Gly Thr Tyr Val Leu
            260                 265                 270
Leu Ala Ser Asp Asp Ala Ser Tyr Ile Thr Gly Gln Val Tyr Gly Val
            275                 280                 285
Thr Gly Gly Thr Gln Ile Asp
    290                 295
```

<210> 5123
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5123

```
Ile Ser Gln Ser Ser Asp Tyr Val Arg His Leu Asn His Trp Thr Gly
1               5                   10                  15
Phe Phe Ile Ser Ile Asn Leu Asn Asn Asn Gln Tyr Lys Phe Ala Ile
            20                  25                  30
Leu Ile Lys Asn Asn Leu Leu Arg Phe Ile Arg Thr Ile Glu Met Ile
```

```
          35                    40                    45
Thr Ala Phe Ala Phe Lys Ile Leu Ile Tyr Leu Leu Gly Phe Ala Leu
     50                    55                    60
Thr Gly Tyr
65
```

<210> 5124
<211> 71
<212> PRT
<213> S.epidermidis

<400> 5124
```
Val Leu Leu Pro Phe Ser Lys Phe Ile Gln Ile Lys Ile Cys Lys Lys
1                    5                    10                   15
Val His Ile Lys Ile His His Ser Leu Phe Ile Glu Asn Thr Ser Phe
               20                    25                    30
Leu Asn Phe Lys Leu Met Leu Glu Lys Tyr Leu Tyr Phe Thr Leu Ile
               35                    40                    45
Ser Pro Phe Ser Leu Ile Asn Phe Thr Leu Leu Phe Pro Phe Ser Thr
     50                    55                    60
Leu Leu Leu Tyr Asn Thr Arg
65                    70
```

<210> 5125
<211> 159
<212> PRT
<213> S.epidermidis

<400> 5125
```
Phe Ala Met Leu Trp His Leu Ile Phe Met Ile Pro Thr Ile Ile Gly
1                    5                    10                   15
Tyr Ser Phe Gly Met Phe Cys Leu Ile Ser Ser Glu Thr Phe Lys Ser
               20                    25                    30
Lys Gly Phe Leu Leu Leu Gly Val Gly Ile Phe Ile Phe Ser Leu Ile
               35                    40                    45
Tyr Ile Leu Ile Tyr Ser Leu Val Thr Leu Ile Pro Asn Val Ala Ile
     50                    55                    60
Leu Ser Arg Arg Phe His Asp Arg Ser Met Thr Met Thr Leu Pro Ile
65                    70                    75                   80
Ile Phe Tyr Val Phe Thr Val Ile Val Ser Gly Phe Asn Tyr Leu Pro
               85                    90                    95
Asn Ile Asp Asn Ser Ala Val Leu Ile Phe Met Gly Ile Ile Cys Leu
               100                   105                   110
Ile Tyr Trp Ile Gly Ser Ile Leu Ile Leu Val Leu Thr Cys Leu Asp
               115                   120                   125
Ser Lys Thr Glu Ser Asn Lys Tyr Gly Pro Ser Pro Lys Tyr Asn Arg
               130                   135                   140
Asn Glu Thr Asn Phe His Gly Asp Asn Ala Asn Pro Val Asp Lys
145                   150                   155
```

<210> 5126
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5126

Val Leu Thr Leu Leu Gln Ile Ser Cys Asn Val Lys His Asn Ser Ile
1   5   10   15
Thr Tyr Gln Glu Lys Trp Arg Asp Trp Pro Lys Glu Ala Ser Ala Thr
            20   25   30
Leu Tyr His Val Pro Ile Pro Val Thr Glu Lys Val Arg Arg
        35   40   45

<210> 5127
<211> 322
<212> PRT
<213> S.epidermidis

<400> 5127
Gly Ile Lys Thr Met Leu Leu Phe Leu Cys Phe Leu Ile Glu Leu Leu
1   5   10   15
Leu Ile Val Leu Leu Tyr Thr Lys Gln Ser Phe Thr Leu Asn Leu Phe
            20   25   30
Ser Phe Ile Leu Tyr Asn Ile Ile Gly Phe Val Met Met Thr Tyr His
        35   40   45
Met Val Thr Val Ser Ile Pro Tyr Asp Met Phe Ile Ile Val Ile Val
        50   55   60
Ala Met Ile Leu Leu Leu Ile Lys His Arg Tyr Ile Phe Lys Leu Gln
65   70   75   80
Thr Gly Arg Phe Phe Ile Leu Gln Leu Ser His His Phe Tyr Thr Val
            85   90   95
Gly Leu Phe Ala Val Ser Cys Leu Tyr Ile Ser Thr Ile Pro Leu Ile
            100   105   110
Ile Ile Asn Ser Leu Ala Leu Trp Ala Ala Thr Ile Ala Phe Ser Thr
            115   120   125
Ile Tyr Ser Phe Ile Gly Tyr Leu Ser Trp Ser Thr Ala Phe Glu Asn
        130   135   140
His Gln Tyr Tyr Lys His Val Lys Leu Ile Met Val Leu Gly Ala Gly
145   150   155   160
Ile Phe Ser Glu Glu Val Thr Thr Leu Leu Ala Ala Arg Leu Asp Lys
            165   170   175
Ala Leu Ser Val Tyr His Ser Gln Arg Thr Lys Pro Ile Ile Ile Val
            180   185   190
Ser Gly Gly Gln Gly Pro Asp Glu Pro Ile Ser Glu Ala Leu Ala Met
        195   200   205
Lys Arg Tyr Leu Ile Ala His Asn Val Pro Glu Asn His Ile Phe Met
        210   215   220
Glu Asn Gln Ser Thr Asn Thr Arg Thr Asn Phe Leu Tyr Ser Lys Ser
225   230   235   240
Ile Ile His Ser Met Met Pro Thr Ser Ser Gln Met Leu Cys Val Thr
            245   250   255
Ser Gln Phe His Val Leu Arg Ala Leu Lys Phe Ala Lys Lys Ala His
            260   265   270
Leu Ser Phe Asp Gly Ile Gly Ser Arg Thr Pro Tyr His Phe Leu Ala
        275   280   285
Gln Ser Met Ile Ile Asp Phe Leu Gly Leu Met Tyr Gln Tyr Lys Thr
        290   295   300
Ile Leu Thr Ile Tyr Phe Ala Met Leu Phe Trp Leu Ala Ile Leu Gln
305   310   315   320
Thr Ile

<210> 5128
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5128
Phe Thr Lys Thr Asn Lys Ser Glu Ala Lys Asn Leu Pro Lys Phe Leu
1   5   10   15
Ala Ser Val Leu Phe Tyr Ser Arg Asp Phe Val Thr Leu Ile Lys Met
            20   25   30
Asn Met Phe Tyr Asn Ile Ile Leu Arg Arg Ile Phe Tyr Ala
            35   40   45

<210> 5129
<211> 210
<212> PRT
<213> S.epidermidis

<400> 5129
Met Ser Glu Thr Leu Gln Asn Gln Arg Gln Phe Asn Ser Gln Phe Glu
1   5   10   15
His Gln Glu Ile His Arg Gly Lys Arg Tyr Gly Lys Lys Lys Arg Ser
            20   25   30
Trp Val Ser Leu Ile Ile Gln Val Phe Val Leu Val Leu Thr Ala Ile
            35   40   45
Thr Gly Tyr Ser Met Leu Lys Gln Pro Ile Phe Lys Ile Ser Phe Val
        50   55   60
Asn Glu Thr Ile Asn Phe His Gln Leu Arg Asn Phe Gln Asp Thr Val
65   70   75   80
Thr Gln Ile Gly Asn Leu Asn Leu Gly Asn Ile Asp Gln Leu Gln Gln
                85   90   95
Ser Val Asp Asn Leu Ile Ile Ile Phe Asn Ile Phe Phe Val Leu Cys
            100   105   110
Leu Ile Ser Leu Phe Ile Thr Val Ile Thr Ile Ile Phe Asn Arg Thr
            115   120   125
Ala Leu Lys Val Val Asn Ile Leu Leu Leu Ala Ile Met Leu Val Ile
            130   135   140
Thr Leu Tyr Phe Ser Tyr Ile Ile His Thr Ile Ala Gln Lys Ile Ser
145   150   155   160
Glu Ser Leu Lys Gln Tyr Tyr Leu Thr Val Ser Pro Glu Gln Val Leu
                165   170   175
Thr Glu Ala Asp Ala Ile His Asn Ala Leu Ile Leu Ile Gly Cys Ser
            180   185   190
Ile Ala Leu Leu Ile Val Ser Leu Phe Phe Arg Asn Arg Leu Pro Arg
            195   200   205
Ile Lys
    210

<210> 5130
<211> 158
<212> PRT
<213> S.epidermidis

<400> 5130
Met Asn Lys Thr Phe Thr Val Thr Arg Thr Val Thr Glu Asp Ala Ile
1   5   10   15

```
Asp Asn Asn Asn His Met His Asp Ala Tyr Tyr Asn Ile Ile Phe Ser
        20                  25                  30
Glu Val Ile Asn Lys Phe Asn Glu Val His Gly Leu Ser Trp Ser Glu
        35                  40                  45
Arg Asp Arg Leu Gln Tyr Thr Val Phe Thr Val Glu Thr His Thr Thr
    50                  55                  60
Phe Leu His Glu Leu Thr Leu Gly Gln Glu Phe Asn Ile Glu Leu Phe
65                  70                  75                  80
Leu Tyr Asn Tyr Asp Asp Lys Arg Thr His Phe Phe Leu Arg Met Leu
                85                  90                  95
Ile Asp Asn Gln Glu Val Val Ala Thr Asn Glu Val Met Met Leu Gly
            100                 105                 110
Ile Asp Arg Thr Gln Arg Arg Ala Ala Pro Phe Pro Lys His Tyr Leu
            115                 120                 125
Asn Ala Ile Gln Asp Tyr Ala His Lys Gln Glu Lys Ile Glu Trp Pro
    130                 135                 140
Pro Gln Leu Gly His Ser Ile Gly Ile Pro Tyr Lys Gly Glu
145                 150                 155
```

<210> 5131
<211> 727
<212> PRT
<213> S.epidermidis

<400> 5131
```
Arg Glu Arg Thr Tyr Ser Met Asn Lys Leu Thr Ile Ile Val Thr Tyr
1               5                   10                  15
Tyr Asn Ala Glu Glu Tyr Ile Thr Gly Cys Leu Glu Ser Ile Lys Gln
            20                  25                  30
Gln Arg Thr Gln Asp Phe Asn Leu Ile Ile Val Asn Asp Gly Ser Thr
            35                  40                  45
Asp Gln Ser Lys Lys Leu Met Asp Glu Ala Ile Lys Asp Tyr Asp Lys
    50                  55                  60
Asn Ile Arg Phe Ile Asp Leu Asp Glu Asn Ser Gly His Ala His Ala
65                  70                  75                  80
Arg Asn Ile Ala Leu Glu Glu Val Glu Thr Pro Tyr Phe Met Phe Leu
                85                  90                  95
Asp Ala Asp Asp Glu Leu Ala Ser Tyr Ala Ile Thr Phe Tyr Leu Glu
            100                 105                 110
Lys Phe Asn Asn Thr Asp Gly Leu Ile Ala Pro Ile His Ser Phe Thr
            115                 120                 125
Thr Gln Arg Pro Gln Phe Val Asp Leu Asp Arg Val Arg Val Glu Tyr
    130                 135                 140
Phe Asn Ala Lys Glu Asn Ile Asn Ser Phe Leu Arg Lys Gln Ser Ala
145                 150                 155                 160
Cys Asn Ile Ile Phe Arg Thr Ala Ile Val Arg Ala His His Ile Arg
                165                 170                 175
Phe Asn Glu Asn Leu Asn Thr Tyr Val Asp Trp Ser Phe Val Leu Glu
            180                 185                 190
Tyr Met Lys Tyr Val Asn Lys Phe Val Arg Ile Phe Asn Phe Pro Phe
            195                 200                 205
Tyr Phe Arg Gly Glu Val Tyr Asp Pro Phe Glu Thr Leu Thr Leu Ser
    210                 215                 220
Glu Gln Asn Phe Asp Ile Leu Phe Lys Asp Tyr Val Asn Ser Phe Tyr
225                 230                 235                 240
Asp Ala Ile Lys Arg Ala Thr Asn Pro Lys Val Arg Glu Phe Ile Val
```

```
                    245                 250                 255
Thr Lys Met Gly Asn Lys Ile Ala Asn Glu Phe Glu Pro Thr Arg Tyr
            260                 265                 270
Asp Ile Asn Glu Arg Tyr Gln Thr His Lys Asp Thr Leu Val Glu Leu
            275                 280                 285
Ser Lys Phe Leu His Val His Leu Val Lys Asn Gln Lys Leu Ile Asn
            290                 295                 300
Lys Ile Glu Thr Ile Leu Leu Met Asn Asn Glu Thr Asp Lys Ala Phe
305                 310                 315                 320
Lys Val Asn Gln Phe Arg Lys Thr Leu Arg His Val Lys Asn Ile Val
                325                 330                 335
Leu Arg Arg Lys Asn Lys Glu Arg Ser Leu Tyr Asp Leu Thr Asp Lys
            340                 345                 350
Glu Asp Asn Val Lys Pro Lys Thr Ile Val Phe Glu Ser Phe Gly Gly
            355                 360                 365
Lys Asn Tyr Ser Asp Ser Pro Lys Tyr Ile Tyr Glu Tyr Met Gln Lys
            370                 375                 380
Tyr Tyr Pro Asn Tyr Arg Tyr Ile Trp Ser Phe Lys Asn Pro Asp Lys
385                 390                 395                 400
Asn Val Val Pro Gly Ser Ala Glu Lys Val Lys Arg Asn Ser Ala Glu
                405                 410                 415
Tyr Tyr Gln Ala Tyr Ser Glu Ala Ser His Trp Val Ser Asn Ala Arg
            420                 425                 430
Thr Pro Leu Tyr Leu Asn Lys Lys Glu Asn Gln Thr Tyr Ile Gln Thr
            435                 440                 445
Trp His Gly Thr Pro Leu Lys Arg Leu Ala Asn Asp Met Lys Val Val
            450                 455                 460
Arg Met Pro Gly Thr Thr Thr Pro Lys Tyr Lys Arg Asn Phe Asn Arg
465                 470                 475                 480
Glu Thr Ser Arg Trp Asp Tyr Leu Ile Ser Pro Asn Arg Tyr Ser Thr
                485                 490                 495
Glu Ile Phe Arg Ser Ala Phe Trp Met Asp Glu Glu Arg Ile Leu Glu
            500                 505                 510
Ile Gly Tyr Pro Arg Asn Asp Val Leu Val Asn Arg Ala Asn Asp Gln
            515                 520                 525
Glu Tyr Leu Asp Glu Ile Arg Thr His Leu Asn Leu Pro Ser Asp Lys
            530                 535                 540
Lys Val Ile Met Tyr Ala Pro Thr Trp Arg Asp Asp Glu Phe Val Ser
545                 550                 555                 560
Lys Gly Lys Tyr Leu Phe Glu Leu Lys Ile Asp Leu Asp Asn Leu Tyr
                565                 570                 575
Lys Glu Leu Gly Asp Asp Tyr Val Ile Leu Leu Arg Met His Tyr Leu
            580                 585                 590
Ile Ser Asn Ala Leu Asp Leu Ser Gly Tyr Glu Asn Phe Ala Ile Asp
            595                 600                 605
Val Ser Asn Tyr Asn Asp Val Ser Glu Leu Phe Leu Ile Ser Asp Cys
            610                 615                 620
Leu Ile Thr Asp Tyr Ser Ser Val Met Phe Asp Tyr Gly Ile Leu Lys
625                 630                 635                 640
Arg Pro Gln Phe Phe Phe Ala Tyr Asp Ile Asp Lys Tyr Asp Lys Gly
                645                 650                 655
Leu Arg Gly Phe Tyr Met Asn Tyr Met Glu Asp Leu Pro Gly Pro Ile
            660                 665                 670
Tyr Thr Glu Pro Tyr Gly Leu Ala Lys Glu Leu Lys Asn Leu Asp Lys
            675                 680                 685
Val Gln Gln Gln Tyr Gln Glu Lys Ile Asp Ala Phe Tyr Asp Arg Phe
```

```
          690                    695                    700
Cys Ser Val Asp Asn Gly Lys Ala Ser Gln Tyr Ile Gly Asp Leu Ile
705                    710                    715                    720
His Lys Asp Ile Lys Glu Gln
                    725


<210> 5132
<211> 499
<212> PRT
<213> S.epidermidis


<400> 5132
Lys Arg Gly Thr Val Phe Val Met Asn Thr Gln His Ser Lys Thr Asp
1                   5                    10                    15
Val Ile Leu Ile Gly Gly Gly Ile Met Ser Ala Thr Leu Gly Thr Leu
                    20                    25                    30
Leu Lys Glu Leu Thr Pro Glu Lys Asp Ile Gln Leu Phe Glu Arg Leu
          35                    40                    45
Ser Gln Pro Gly Glu Glu Ser Ser Asn Val Trp Asn Asn Ala Gly Thr
          50                    55                    60
Gly His Ser Ala Leu Cys Glu Leu Asn Tyr Thr Lys Glu Gly Lys Asp
65                    70                    75                    80
Gly Ser Val Asp Ile Thr Lys Ala Ile His Ile Asn Glu Gln Phe Gln
                    85                    90                    95
Ile Ser Lys Gln Phe Trp Ala Tyr Leu Ile Arg Glu Gly His Ile Glu
                    100                   105                   110
Ser Pro Asp Lys Phe Ile Gln Ser Val Pro His Met Ser Phe Val Lys
          115                   120                   125
Gly Glu Glu Asn Val Lys Phe Leu Lys Ser Arg Val Ala Ser Leu Gln
          130                   135                   140
Lys Asn Val Leu Phe Glu Lys Met Lys Ile Ser Gln Asp Pro Glu Lys
145                   150                   155                   160
Ile Asn Ser Trp Val Pro Leu Met Met Glu Gly Arg Gln Ser Asp Glu
                    165                   170                   175
Ala Ile Ala Ile Thr Tyr Asp Glu Thr Gly Thr Asp Val Asn Phe Gly
          180                   185                   190
Ala Leu Thr Lys Lys Leu Ile Ala Asn Leu Gln Gln Lys Asn Val Gly
          195                   200                   205
Ile Asn Tyr Lys His Glu Val Leu Asp Ile Lys Lys Leu Asn Asn Gly
          210                   215                   220
Asn Trp Gln Val Val Val Lys Asp Leu Asn Thr Ser Asn Val Met Asn
225                   230                   235                   240
Tyr Glu Ser Lys Phe Val Phe Ile Gly Ala Gly Gly Ala Ser Leu Pro
                    245                   250                   255
Leu Leu Gln Lys Thr Lys Ile Lys Glu Ser Lys His Ile Gly Gly Phe
          260                   265                   270
Pro Val Ser Gly Leu Phe Leu Arg Cys Lys Asn Pro Asp Val Ile His
          275                   280                   285
Arg His His Ala Lys Val Tyr Gly Lys Ala Glu Val Gly Ala Pro Pro
          290                   295                   300
Met Ser Val Pro His Leu Asp Thr Arg Phe Val Asn Gly Glu Lys Ser
305                   310                   315                   320
Leu Leu Phe Gly Pro Phe Ala Gly Phe Ser Pro Lys Phe Leu Lys Asn
                    325                   330                   335
Gly Ser Tyr Leu Asp Leu Val Lys Ser Val Lys Pro Asn Asn Met Ile
          340                   345                   350
```

```
Thr Met Leu Ser Ala Gly Val Lys Glu Phe Asn Leu Thr Lys Tyr Leu
        355                 360                 365
Val Ser Gln Leu Met Leu Ser Asn Glu Glu Arg Ile Asn Asp Leu Arg
        370                 375                 380
Val Phe Leu Pro Glu Ala Lys Asp Glu Asp Trp Glu Val Ile Thr Ala
385                 390                 395                 400
Gly Gln Arg Val Gln Val Ile Lys Asp Thr Asp Lys Ser Lys Gly Gln
                405                 410                 415
Leu Gln Phe Gly Thr Glu Val Ile Thr Ser Glu Asp Gly Ser Leu Ala
                420                 425                 430
Ala Leu Leu Gly Ala Ser Pro Gly Ala Ser Thr Ala Val Asp Ile Met
        435                 440                 445
Phe Asp Val Leu Gln Arg Cys Tyr Lys Ser Glu Phe Lys Ser Trp Glu
        450                 455                 460
Pro Lys Ile Lys Glu Met Val Pro Ser Phe Gly Leu Lys Leu Ser Glu
465                 470                 475                 480
His Glu Asp Met Tyr His Ser Ile Asn Glu Glu Val Lys Lys Tyr Leu
                485                 490                 495
Asn Val Lys
```

<210> 5133
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5133
```
Tyr Ala Asp Ala His Val Thr Leu Asn Pro Asn Glu Ser Glu Pro Glu
1               5                   10                  15
Ser Tyr Asp Lys Tyr Asp Val Arg Val Pro Val Glu Gln Asn Asp His
                20                  25                  30
Thr Met Lys Val Glu Leu Asp Val Pro Lys Gly Leu Asn Val Glu Ser
        35                  40                  45
Val Lys Thr Ile Glu Gly Phe Lys His His Phe Leu Lys Ile Lys Arg
        50                  55                  60
Glu His Tyr
65
```

<210> 5134
<211> 56
<212> PRT
<213> S.epidermidis

<400> 5134
```
Ile Phe Tyr Phe Arg His Ala Phe Ser Phe Ser Val Val Phe Ser Phe
1               5                   10                  15
Asp Gln Val Lys Asp Lys Asp Phe Glu Val His Asp Arg Leu Ile Leu
                20                  25                  30
Asn Tyr Phe Ala His Tyr Arg Ile Asp Asp Leu Ser Leu Ser Gln Ile
        35                  40                  45
Asp Val Cys Leu Ile Leu Pro Phe
        50                  55
```

<210> 5135
<211> 56
<212> PRT

<213> S.epidermidis

<400> 5135
Leu Ser Arg Ala Ile Leu Leu Phe Lys Phe Tyr Leu Ser Thr Gly Leu
1   5   10   15
Ala Leu Ser Pro Trp Lys Phe Val Ser Leu Arg Leu Tyr Phe Gly Leu
            20   25   30
Gly Pro Tyr Leu Leu Asp Ser Val Leu Leu Ser Lys Gln Val Asn Thr
            35   40   45
Asn Ile Asn Ile Asp Pro Ile Gln
        50   55

<210> 5136
<211> 662
<212> PRT
<213> S.epidermidis

<400> 5136
Gly Gly His Phe Met Thr Ala Thr Phe Ile Ile Ile Tyr Ile Val Val
1   5   10   15
Ala Leu Ile Leu Ile Gly Phe Ile Asn Phe Phe Leu Ile Lys Arg Lys
            20   25   30
Arg Lys Asn Lys Asp Lys Arg Val Glu Gln Arg Ser Thr Ile Asp Ser
            35   40   45
Lys Arg Glu Ser Asn Gln Ser Lys Phe Lys Ala Ser Asp Leu Glu Gln
        50   55   60
Thr Thr Lys Ser Asn Thr Asp Pro Thr Gln Ser Asn Asp Ile Glu Asp
65   70   75   80
Glu Lys Arg Lys Asn His Phe Asp Ser Glu Ile Asp Asn Ala Ser Gln
                85   90   95
Phe Ile Asn Thr Asp Ser Lys Glu Asp Arg Asn Ala Leu Ser His Lys
            100   105   110
Asn Gln Glu Glu Asp Asp Ala Ser Asn Asp Val Leu Asn Pro Ile Asp
        115   120   125
Pro Asn Ser Thr Glu Gly Arg Val Asn Glu Arg Ile Lys Asn Gln Glu
        130   135   140
Ser Asn Phe Ile Phe Gly Lys Gly Ile Thr Arg Gly Lys Ile Leu Ala
145   150   155   160
Ala Met Leu Phe Gly Met Phe Ile Ala Ile Leu Asn Gln Thr Leu Leu
            165   170   175
Asn Val Ala Leu Pro Lys Ile Asn Thr Glu Phe Asn Ile Ser Ala Ser
            180   185   190
Thr Gly Gln Trp Leu Met Thr Gly Phe Met Leu Val Asn Gly Ile Leu
            195   200   205
Ile Pro Ile Ser Ala Phe Leu Phe Asn Lys Tyr Ser Tyr Arg Lys Leu
        210   215   220
Phe Ile Ile Gly Leu Ala Leu Phe Thr Leu Gly Ser Leu Val Cys Ala
225   230   235   240
Ile Ser Phe Asn Phe Pro Ile Met Met Ser Gly Arg Val Leu Gln Ala
            245   250   255
Ile Gly Ala Gly Ile Leu Met Pro Leu Gly Ser Asn Val Ile Val Thr
            260   265   270
Ile Phe Pro Pro Glu Lys Arg Gly Val Ala Met Gly Thr Met Gly Ile
            275   280   285
Ala Met Ile Leu Ala Pro Ala Ile Gly Pro Thr Leu Ser Gly Tyr Ile
        290   295   300

```
Val Gln Asn Tyr Asp Trp Asn Val Met Phe Tyr Gly Met Phe Phe Ile
305                 310                 315                 320
Gly Ile Ile Ala Ile Val Ile Gly Leu Phe Trp Phe Lys Leu Tyr Gln
                325                 330                 335
Ser Thr Thr Asn Pro Lys Ala Asp Ile Pro Gly Ile Ile Tyr Ser Thr
                340                 345                 350
Ile Gly Phe Gly Ser Leu Leu Tyr Gly Phe Ser Glu Ala Gly Asn Lys
            355                 360                 365
Gly Trp Gly Ser Thr Glu Ile Val Thr Met Phe Ile Val Gly Thr Val
        370                 375                 380
Phe Ile Ile Phe Phe Ile Leu Arg Glu Leu Arg Met Lys Ala Pro Met
385                 390                 395                 400
Leu Ser Leu Glu Val Leu Lys Tyr Pro Thr Tyr Thr Leu Thr Thr Ile
                405                 410                 415
Ile Asn Met Ile Val Met Met Ser Leu Tyr Gly Gly Met Ile Leu Leu
                420                 425                 430
Pro Leu Tyr Leu Gln Asn Leu Arg Gly Phe Ser Ala Leu Asp Ser Gly
            435                 440                 445
Leu Leu Leu Leu Pro Gly Ala Leu Val Met Gly Ala Leu Gly Pro Val
        450                 455                 460
Ala Gly Lys Leu Leu Asp Thr Ile Gly Ile Lys Pro Leu Ala Ile Phe
465                 470                 475                 480
Gly Ile Gly Ile Met Thr Tyr Ala Thr Trp Glu Leu Ser Lys Leu Asn
                485                 490                 495
Met Asp Thr Thr Tyr Leu His Ile Met Trp Ile Tyr Ile Val Arg Ser
                500                 505                 510
Phe Gly Met Ala Phe Val Met Met Pro Ile Ile Thr Ala Gly Met Asn
            515                 520                 525
Ala Leu Pro Pro Arg Leu Ile Ser His Gly Asn Ala Phe Val Asn Thr
        530                 535                 540
Met Arg Gln Leu Ala Gly Ser Ile Gly Thr Ala Ile Leu Val Thr Val
545                 550                 555                 560
Met Thr Thr Gln Gln Thr Asn His Leu Ser Ala Phe Gly Glu Glu Leu
                565                 570                 575
Asp Lys Thr Asn Pro Val Ile Gln Asp His Met Arg Glu Leu Ala Gln
            580                 585                 590
Gln Tyr Gly Gly Glu Ser Ala Ala Met Lys Leu Leu Leu Glu His Val
            595                 600                 605
Asn Lys Leu Ala Ser Val Glu Gly Val Asn Asp Ala Phe Ile Val Ala
        610                 615                 620
Thr Ile Ile Ser Ala Ile Ala Leu Ile Leu Ser Leu Phe Leu Gln Gly
625                 630                 635                 640
Lys Lys Lys Ala Gln Leu Ser Ala Glu Lys Ala Asn Ala Glu Asp Tyr
                645                 650                 655
Pro Ser Gln Gln Asp Lys
                660
```

<210> 5137
<211> 221
<212> PRT
<213> S.epidermidis

<400> 5137

```
Val Lys His Leu Arg Leu Ile Gly Leu Pro His Lys Asn Lys Asn Thr
1               5                   10                  15
Tyr Val Asn Leu Ile Leu Arg Val Ser Leu Met Lys Ala Tyr Leu Tyr
```

```
                20                          25                          30
Lys Phe Met Pro Leu Leu Ile Phe Val Ile Gly Leu Ile Ile Phe Tyr
        35                          40                          45
Val Phe Asn Asp Tyr Pro Thr Leu Ile His Val Ile Val Ile Ile Ala
    50                          55                          60
Phe Ile Thr Asn Gly Leu Lys Asn Val Tyr Phe Val Asn Asn Asn Ile
65                          70                          75                          80
Arg Asn His Met Ile Trp Val Ser Pro Lys Leu Asp Arg Ile Leu Gly
                85                          90                          95
Met Ile Ser Gly Ile Leu Tyr Phe Gly Ile Tyr Val Val Gly Phe Ile
                100                         105                         110
Lys Gln Gln Pro Leu Trp Ile Val Met Leu Ile Leu Val Ser Thr Val
        115                         120                         125
Gly Thr Ala Val Leu Leu Glu Thr Lys Leu His Ile Thr Ser Leu Gln
    130                         135                         140
Leu Glu Glu Thr Leu Ser Ser Glu Arg Ile Lys Arg Lys Val Ile Ser
145                         150                         155                         160
Arg His Lys Ala Gln Arg Leu Lys Cys Ile Phe Phe Thr Val Ile Val
                165                         170                         175
Val Val Ile Ile Ser Met Leu Ile Ser Leu Tyr Leu Lys Leu Met Val
                180                         185                         190
Ile Phe Gly Leu Ala Val Thr Ile Phe Ile Leu Ala Ser Ile Ser Val
                195                         200                         205
Ala Ile Phe Glu Lys Tyr Phe Thr Ile Ile Glu Asn Met
    210                         215                         220
```

```
<210> 5138
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5138
Ser Cys Leu Tyr Gln Tyr Phe Thr Val Ile Leu Asn Cys Leu Ile Leu
1                   5                   10                          15
Asn Leu Lys Ile Lys Tyr Arg Trp Cys Val Ser Lys Ser His Tyr Lys
            20                          25                          30
Thr Val Asn Asn His Lys Ile Val Asp Ser Gln Tyr Ile Leu Trp Gly
        35                          40                          45
Ile Phe Tyr Phe Phe Asp Asp
    50                          55
```

```
<210> 5139
<211> 72
<212> PRT
<213> S.epidermidis

<400> 5139
Val His Leu Leu Arg Ser Ser Ile Leu Ala Leu Leu His Leu Ser Cys
1                   5                   10                          15
Val Val Ala Leu Leu Phe Ile Lys Val Ser Asn Tyr Ile Leu His Glu
            20                          25                          30
Ile Gln Ile Phe Asn Ile Pro His Phe Leu Phe His Ile Asn His Phe
        35                          40                          45
Ile Leu Leu Leu Asn Tyr Leu Tyr Gln His Leu Ile Ile Thr Tyr Lys
    50                          55                          60
Leu Lys Gly Arg Asp Ile His Asp
```

```
<210> 5140
<211> 341
<212> PRT
<213> S.epidermidis

<400> 5140
Lys Gly Asp Tyr Val Met Ile Ser Lys Val Glu His Gln Arg His Gly
1               5                   10                  15
Leu Asp Leu Ile Lys Ile Asp Asn Asp Asp Thr Lys Ile Val Phe Thr
            20                  25                  30
Asn Tyr Gly Ala Arg Ile Val Ser Trp Lys Tyr His Asp Asn Asn Ile
        35                  40                  45
Val Leu Gly Asn Val Val Glu Ala Asp Glu Phe Tyr Phe Glu Glu Pro
        50                  55                  60
Phe Asn Phe Gly Ala Thr Ile Gly Arg Tyr Ala Gly Arg Ile Glu Asn
65                  70                  75                  80
Ala Ser Phe Lys Leu Asp Asp Asp Thr Phe Gln Leu Glu Ser Asn Asp
                85                  90                  95
Gly Gln His His Leu His Gly Gly Ser His Gly Leu Asn Arg Arg Ile
            100                 105                 110
Phe Asp Tyr Glu Ile Val Asp Asp Ile Gly Gln Val Lys Ile Ile Phe
            115                 120                 125
Thr Thr Thr Ile Lys Glu Glu Glu Asp Asn Tyr Pro Gly Asp Met Met
        130                 135                 140
Val Lys Val Ile His Thr Tyr Asp Ala Asn His Arg Trp Ser Val Gln
145                 150                 155                 160
Tyr Glu Ala Lys Ser Thr Lys Lys Thr Val Phe Asn Pro Ser Asn His
                165                 170                 175
Val Tyr Phe Asn Leu Asn Arg Asp Asn Asn Val Val Tyr Asn His Cys
            180                 185                 190
Ile Asn Ser Ser Ala Leu Lys Met Tyr Met Leu Asn Asn Lys His Ile
        195                 200                 205
Val Lys Glu Gly Gln Ser Leu Asp Leu His Arg Leu Leu Asp Thr Asn
        210                 215                 220
Lys Val Tyr Leu Lys Asp Ile Phe Glu Ser Asp Asn Glu Thr Leu Gln
225                 230                 235                 240
Gln Gln Ile Asn His Tyr Asn Gly Ile Asp His Pro Phe Glu Phe Gly
                245                 250                 255
Gly Asn Glu Leu Thr Ile Asp Asn Ser Glu Phe Glu Leu Asn Ile Lys
            260                 265                 270
Thr Asp Met Pro His Phe Val Met Phe Thr Phe Asn Asp Pro Gln Val
            275                 280                 285
Trp Asn Asn Asp Phe Asn Ile Tyr Lys Ala His Ser Gly Phe Ser Ile
        290                 295                 300
Glu Thr Gln Tyr Met Pro Asn Asp Ile Asn Met Tyr Gly Ala Lys Ala
305                 310                 315                 320
Gln Ser Ile Leu Glu Ala Asp Thr Leu Phe Thr Ser Lys Thr Ser Phe
            325                 330                 335
Gln Ile His Glu Lys
            340

<210> 5141
<211> 51
<212> PRT
```

<213> S.epidermidis

<400> 5141
Tyr Lys Ile Tyr Gln Ser Ile Ile Arg Glu Ser Arg Leu Asp Tyr Glu
1   5   10   15
Arg Asp Glu Glu Trp Gln Cys Leu Gly Ile Asn Ser Phe Ile Val Ile
            20   25   30
Cys Leu Thr Ile Ser Arg Cys Trp Tyr Tyr Phe Leu Val Ile Leu Pro
            35   40   45
Leu Cys His
        50

<210> 5142
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5142
Ile Asp Arg Tyr Glu Lys Ala Ser Pro Met Ile Lys Val Ser Asn Val
1   5   10   15
Ile Thr Gly Leu Ala Tyr Leu Tyr Ile Leu Ile Leu Lys Ile Lys Ser
            20   25   30
Asn Thr Lys Ile Lys Leu Leu Glu Cys Glu Ser Leu Thr Gln Asp Leu
            35   40   45
Phe

<210> 5143
<211> 110
<212> PRT
<213> S.epidermidis

<400> 5143
Gly Gly Arg Tyr Met Asn Val Gln Phe Lys Lys Gly Ala Leu Glu Leu
1   5   10   15
Ile Val Leu Leu Ile Ile Lys Lys Glu Asp Gln Tyr Gly Tyr Ser Leu
            20   25   30
Val Gln Asn Ile Ser Arg Tyr Met Thr Ile Ala Glu Gly Thr Val Tyr
            35   40   45
Pro Leu Leu Arg Arg Leu Val Lys Ser Gly Glu Leu Ser Thr Tyr Tyr
        50   55   60
Gln Pro Ser Thr Glu Gly Pro Ser Arg Lys Tyr Tyr Gln Leu Thr Gln
65   70   75   80
Gln Gly Ala Ala Arg Val Asn Gln Leu Glu Glu Asp Trp Lys Leu Phe
                85   90   95
Thr Glu Ala Val Glu His Phe Ile Glu Glu Ser Glu Asn Glu
            100   105   110

<210> 5144
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5144
Cys Phe Leu Tyr Thr Gln Leu Ser Cys Thr Phe Asn His Arg Lys Ser
1   5   10   15

Glu Ile Thr Ser Ile Tyr Lys Ile Met Ser Ile Asn Val Glu Arg Ala
     20   25   30
Glu Arg Asn Ile Glu Glu Leu Phe Pro Lys Tyr Ala His Leu Asp Asp
     35   40   45
Ile

<210> 5145
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5145
Thr Arg Ser Tyr Pro Trp Tyr Asp Phe Gly His Thr Ile Phe Trp Tyr
1   5   10   15
Leu Arg Gly Trp Leu Tyr Lys Ala Thr Ala Phe Met Asp Ser Asp Ala
     20   25   30
Tyr Ser Ser Ile Asn Ser Gly Tyr Cys Gly Phe Ile Arg Asn Lys Ile
       35   40   45
Thr Tyr Tyr Ile Thr Ser Ile Arg Gly Asp Val Ile Ile
     50   55   60

<210> 5146
<211> 324
<212> PRT
<213> S.epidermidis

<400> 5146
Phe Ile Lys Tyr Glu Gly Val Arg Lys Met Thr Val Thr Val Arg Phe
1   5   10   15
Gln Ser Leu Ser Gln Pro Leu Thr Leu Val Ser Asn Val Lys Glu Ile
     20   25   30
Pro Lys Asp Ala Thr Ile Ile Trp Tyr Asp Phe Glu Asn Ala Thr Asp
     35   40   45
Glu Glu Asn Glu Tyr Leu Lys Asn His Phe Asp Phe Asn Tyr Leu Glu
     50   55   60
Ile Asp Asp Ala Ile Asn Gly Asp Pro Arg Val Lys Tyr Ile Glu Tyr
65   70   75   80
Asp Ala Tyr Gln Tyr Met Ile Phe His Ser Ile Ile Asn Asp Asp Tyr
       85   90   95
Ser Pro Ile Ser Leu Ser Val Phe Leu Glu Gly Asn Val Leu Val Thr
       100   105   110
Tyr His His Lys His Phe Pro Ser Leu Lys Arg Val Ala Gln Tyr Asn
       115   120   125
Ala Glu Asn His Asp Ser Glu Leu Asp Cys Ala Asp Ile Val Ile His
      130   135   140
Ile Leu Asp Cys Met Val Asp Lys Tyr Phe Asn Phe Val Tyr Gly Ile
145   150   155   160
Glu Asp Lys Val Tyr Asn Phe Glu Ala Lys His Val Asp Asp Arg Tyr
       165   170   175
Ser Lys Ser Val Met Glu Asn Val Phe Gln Leu Arg Ser Asp Leu Ile
       180   185   190
Lys Ile Lys Arg Val Leu Phe Pro Met Gln Glu Val Val Asp Thr Met
       195   200   205
Lys Gln Glu Gly Asn Ile Ile Lys Asp Ala Lys His Arg Met Tyr Ile
      210   215   220

```
Gln His Ile Asp Asp His Leu Ile Lys Gln Arg Ser Val Ile Arg Thr
225             230             235             .           240
Ser Gln Glu Met Thr Asn Glu Ile Arg Glu Asn Tyr Glu Ser Phe Thr
            245             250             255
Ser Phe Arg Met Asn Ser Ile Met Gln Ile Leu Thr Leu Val Ser Val
            260             265             270
Ile Phe Ser Pro Leu Thr Phe Ile Ala Gly Val Tyr Gly Met Asn Phe
            275         .       280             285
Glu Phe Met Pro Glu Leu Lys Trp His Tyr Ala Tyr Phe Val Cys Leu
            290             295             300
Thr Leu Met Leu Ile Ile Thr Ile Ile Leu Ile Ile Phe Phe Lys Lys
305             310             315             320
Lys Lys Trp Phe
```

```
<210> 5147
<211> 43
<212> PRT
<213> S.epidermidis
```

```
<400> 5147
Lys Cys Asn Gln Tyr Ile Gln Ile Arg Phe Ile Phe Leu Ile Gly Asn
1               5               10              15
Asp Ser Tyr Tyr Ser Asp Ile Gln Thr Tyr Asn Leu Asn Phe Ile Arg
            20              25              30
Cys Cys Arg Phe Asn Ile Lys Arg Lys Asp Val
            35              40
```

```
<210> 5148
<211> 42
<212> PRT
<213> S.epidermidis
```

```
<400> 5148
Leu Gly Asn Gln Arg Ile Phe Arg Ile Thr Phe Phe His Gln Ile Phe
1               5               10              15
Leu Glu Met Gly Phe His Asn Gly Leu Gly Met Asn Leu Ile Phe Asn
            20              25              30
Phe Phe Glu Arg Ser Glu Arg Arg Phe Phe
            35              40
```

```
<210> 5149
<211> 387
<212> PRT
<213> S.epidermidis
```

```
<400> 5149
Trp Arg Leu His Thr Met Lys Asn Ser Arg Phe Ser Gly Phe Gln Trp
1               5               10              15
Ala Met Met Val Phe Val Phe Phe Val Ile Thr Met Ala Leu Ser Val
            20              25              30
Ile Leu Arg Asp Phe Gln Ala Thr Ile Gly Val Lys Arg Phe Val Phe
            35              40              45
Ser Ile Lys Asp Leu Ala Pro Phe Ile Ala Ala Ile Val Cys Ile Leu
        50              55              60
Val Phe Lys His Arg Lys Glu Gln Leu Ala Gly Leu Lys Phe Ser Ile
```

```
      65                      70                      75          ·        80
      Ser Leu Lys Val Ile Glu Arg Leu Leu Leu Ala Leu Ile Leu Pro Leu
                          85                      90                      95
      Ile Ile Leu Met Ile Gly Leu Phe Ser Phe Asn Thr Tyr Ala Asp Ser
                          100                     105                     110
      Phe Ile Leu Leu Gln Thr Ser Asp Leu Ser Val Ser Leu Leu Thr Ile
                          115                     120                     125
      Leu Ile Gly His Ile Leu Met Ala Phe Val Val Glu Phe Gly Phe Arg
                  130                     135                     140
      Ser Tyr Leu Gln Asn Ile Leu Glu Thr Arg Met Asn Thr Phe Phe Ala
      145                     150                     155                     160
      Ser Ile Val Val Gly Leu Ile Tyr Ser Val Phe Thr Ala Asn Thr Thr
                          165                     170                     175
      Tyr Gly Val Glu Tyr Ala Gly Tyr His Phe Leu Tyr Thr Phe Met Phe
                  180                     185                     190
      Ser Met Ile Ile Gly Glu Leu Ile Arg Ala Thr Asn Gly Arg Thr Ile
                  195                     200                     205
      Tyr Ile Ala Thr Ala Phe His Ala Ser Met Thr Phe Ala Leu Val Phe
                  210                     215                     220
      Leu Phe Ser Glu Glu Thr Gly Asp Leu Phe Ser Met Lys Val Ile Ala
      225                     230                     235                     240
      Leu Ser Thr Thr Ile Val Gly Val Ser Phe Ile Ile Ile Ser Leu Ile
                          245                     250                     255
      Ile Arg Ala Ile Val Tyr Lys Thr Thr Lys Gln Ser Leu Asp Glu Val
                  260                     265                     270
      Asp Pro Asn Asn Tyr Leu Ser His Ile Gln Asp Glu Glu Pro Ser Gln
                  275                     280                     285
      Glu Asp Ala Ser Ser Thr Ser Asn His Asp Val Ser Ser Lys Asp Glu
                  290                     295                     300
      Thr Lys Gln Gln Asp Ile Asp Asn Asp Lys His Gln Ser Lys Lys Pro
      305                     310                     315                     320
      Asn Lys Ser Asp Asp Ala Leu Thr Thr Ser Asn Tyr Lys Glu Asp Ala
                          325                     330                     335
      Ser Ser Val Asn Lys Glu Thr Asp Thr Thr His Asn Asp Asn Ile Lys
                  340                     345                     350
      Asp His Ser Thr Tyr Thr Glu Asp Arg His Ser Ser Val Val Asn Asp
                  355                     360                     365
      Val Lys Asp Glu Ile His Glu Val Glu Asp His Lys Ala Asp Thr Asp
                  370                     375             /       380
      Lys Ser His
      385
```

```
<210> 5150
<211> 228
<212> PRT
<213> S.epidermidis

<400> 5150
```

```
      Glu Arg Lys His Met Ile Asn Cys Leu Ile Val Asp Asp Asp Lys Lys
      1                   5                       10                      15
      Leu Leu Gln Tyr Val Ser Ser His Leu Glu Arg Glu Ser Ile Gln Thr
                      20                      25                      30
      His Thr Phe Thr Ser Gly Glu Ala Ser Leu Asp Phe Leu Glu Asn Lys
                  35                      40                      45
      Asn Val Asp Ile Ala Ile Val Asp Ile Met Met Ser Gly Met Asp Gly
          50                      55                      60
```

```
Phe Glu Leu Cys Gln Thr Leu Lys Asp Asp Tyr His Ile Pro Val Ile
65                  70                  75                  80
Met Leu Thr Ala Arg Asp Ala Leu Ser Asp Lys Glu Arg Ala Phe Leu
                85                  90                  95
Ser Gly Thr Asp Asp Tyr Val Thr Lys Pro Phe Glu Val Lys Glu Leu
                100                 105                 110
Leu Phe Arg Ile Lys Ala Val Leu Arg Arg Tyr Gln Ile Asn Ala Asp
                115                 120                 125
Asn Glu Leu Gln Leu Gly Asn Leu Ile Leu Asn Gln Ser Tyr Met Glu
    130                 135                 140
Ile Thr Val Gly Ser Lys Thr Met Asn Leu Pro Asn Lys Glu Phe Gln
145                 150                 155                 160
Leu Leu Phe Leu Leu Ala Ser Asn Pro Lys His Ile Phe Thr Arg Asp
                165                 170                 175
Asp Ile Ile Glu Lys Ile Trp Gly Phe Asp Tyr Glu Gly Asp Asp Arg
                180                 185                 190
Thr Val Asp Val His Ile Lys Arg Leu Arg Gln Arg Leu Ser Lys Leu
                195                 200                 205
Lys Ser Ser Val Ser Ile Gln Thr Val Arg Gly Gln Gly Tyr Arg Val
    210                 215                 220
Asp Gln Asn Val
225


<210> 5151
<211> 236
<212> PRT
<213> S.epidermidis


<400> 5151
Arg Gly Glu Gln Arg His Met Lys Asp Ala Lys Glu Leu Lys Leu Met
1               5                   10                  15
Thr Leu Glu Asp Val Leu Ser Gln Ile Glu Asn Gly Met Thr Ile Gly
                20                  25                  30
Ile Gly Thr Gly Ser Thr Ile Glu Leu Leu Ile Pro Gln Ile Ala Glu
                35                  40                  45
Leu Ile Gln Gln Lys Asn Tyr Thr Ile Thr Gly Val Cys Thr Ser Asn
    50                  55                  60
Lys Thr Ala Phe Leu Ala Lys Glu Leu Ala Met Asn Ile Val Asp Val
65                  70                  75                  80
Asn Asp Val Glu Lys Ile Asp Leu Ala Ile Asp Gly Ala Asp Glu Val
                85                  90                  95
Asp Ser Ala Leu Asn Leu Ile Lys Gly Gly Gly Gly Ala Leu Phe Arg
                100                 105                 110
Glu Lys Val Ile Asp Glu Met Ala Asp Arg Phe Val Val Val Val Asp
                115                 120                 125
Glu Ser Lys Leu Val Asn Tyr Leu Gly Glu Thr Phe Ala Leu Pro Val
    130                 135                 140
Glu Val Asp Lys Phe Asn Trp Tyr Gln Val Ala Lys Lys Ile Glu Arg
145                 150                 155                 160
Thr Tyr Asp Ile His Val Ser Arg Arg Val Asn Glu Asp Val Pro Phe
                165                 170                 175
Ile Thr Asp Asn Gly Asn Tyr Ile Leu Asp Cys Ser Leu Gln Asn Arg
                180                 185                 190
Ile Pro Ala Tyr Glu Leu His Glu Phe Leu Ile His Leu Thr Gly Val
    195                 200                 205
Leu Glu Thr Gly Tyr Phe Leu Asp Ile Ala Asp Gln Val Ile Val Gly
```

```
        210                    215                    220
Thr Gln Glu Gly Val Lys Ile Leu Asn Lys Glu Thr
225                    230                    235


<210> 5152
<211> 145
<212> PRT
<213> S.epidermidis


<400> 5152
Lys Thr Glu Gln Asn Phe Tyr Met Lys Gly Gly Val Leu Val Leu Lys
1               5                   10                  15
Ile Met Ser Lys His Ser Ala Thr Leu Val Ile Met Phe Leu Ile Thr
            20                  25                  30
Leu Leu Pro Ile Phe Gln Tyr Gln Ala Ser Ala His Ala Thr Leu Glu
        35                  40                  45
Lys Ser Thr Pro Gln Gln Gln Gly Val Ile Lys Asp Lys Pro Glu Ala
    50                  55                  60
Ile Lys Leu Glu Phe Asn Glu Pro Val Asn Thr Lys Tyr Ser Ser Val
65                  70                  75                  80
Thr Leu Phe Asp Asp Lys Gly Lys Lys Ile Lys Asp Leu Lys Pro Ile
            85                  90                  95
Thr Thr Gly Trp Ser Gln Thr Val Val Phe Ser Ser Glu Gln Ile Val
            100                 105                 110
Asn Gly Thr Asn Thr Ile Glu Trp His Thr Val Ser Ala Asp Gly His
        115                 120                 125
Glu Val Gly Asp Thr Phe Glu Phe Ser Val Gly Lys Val Arg Leu Lys
    130                 135                 140
Met
145


<210> 5153
<211> 134
<212> PRT
<213> S.epidermidis


<400> 5153
Ile Met Thr Lys Ile His Phe Glu Ala Pro Ser Pro Glu Asp Tyr Cys
1               5                   10                  15
Asn Leu Arg Ala Asn Ala Gly Met Ser Ser Lys Ser Ile Glu Ala Ala
            20                  25                  30
Ile Lys Gly Leu Pro His Ala Cys Phe Asn Val Thr Leu Tyr Glu Asn
        35                  40                  45
Asp Met Leu Ile Gly Met Gly Arg Val Ile Gly Asp Gly Gly Thr Val
    50                  55                  60
Phe Gln Ile Val Asp Ile Ala Val Lys Asp Ile Tyr Gln Gly Leu Gly
65                  70                  75                  80
His Gly Met Thr Ile Met His Glu Ile Met Lys Tyr Ile Glu Ser Val
            85                  90                  95
Ala Glu Glu Gly Thr Tyr Val Ser Leu Ile Ala Asp Tyr Pro Ala Asp
            100                 105                 110
Gln Leu Tyr Glu Lys Phe Gly Phe Lys Ser Thr Glu Pro Tyr Ser Lys
        115                 120                 125
Gly Met Tyr Ile Lys Tyr
    130
```

<210> 5154
<211> 66
<212> PRT
<213> S.epidermidis

<400> 5154
Thr Lys Tyr Lys Cys Leu Pro Gln Ser Ile Thr Gln Lys Thr Lys Ile
1   5   10   15
Asn Ile Gln Ser Tyr Ile Phe Gly Val Gln His Lys Ser Val Ile Glu
            20   25   30
Leu Thr Leu Leu Gln Ile Gly Gly Leu Asn Glu Tyr Asp Lys Ile Val
        35   40   45
Cys His Ser Cys Leu Tyr Asn Ser Asn Met Tyr Cys Leu Cys Asn Leu
    50   55   60
Ile Thr
65

<210> 5155
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5155
Met Lys Tyr Lys Thr Thr Phe Lys Ile Lys Pro Pro Phe Thr Pro Ala
1   5   10   15
Lys Asp Leu Ala Ile Phe Ser Lys Ile Ile Thr Lys Thr Leu Ser Lys
            20   25   30
Leu Leu Leu Lys Lys Leu Val Asn Val Leu His Gln Leu Asp Lys Leu
        35   40   45
Ile Leu Thr Phe Ile Thr Lys Leu Asn Leu Asn Lys Ile
    50   55   60

<210> 5156
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5156
Lys Arg His Lys Met His Leu Leu Leu His Pro Met Thr Phe Phe Ser
1   5   10   15
Tyr Leu Asn Ile Glu Ile Asn Asp Asn Thr Ser Ser Ile Ile Met Ile
            20   25   30
Asp Asp Leu Ile Asp Gly Phe Trp Asp Phe Ile Glu
        35   40

<210> 5157
<211> 537
<212> PRT
<213> S.epidermidis

<400> 5157
Gly Glu Phe Asn Met Leu Val Glu Ser Phe Asn Pro Phe Gly Asn Leu
1   5   10   15
Leu Leu Ser Ser Leu Ile Ala Ala Ile Pro Ile Ile Leu Phe Leu Leu
            20   25   30
Cys Leu Thr Val Phe Lys Met Lys Gly Ile Tyr Ala Ala Ile Thr Thr

```
          35                    40                    45
Leu Val Val Thr Leu Leu Ile Ala Ile Pro Phe Phe Lys Leu Pro Val
    50                    55                    60
Gly Ile Ala Ser Gly Ala Val Val Glu Gly Phe Phe Gln Gly Ile Phe
65                    70                    75                    80
Pro Ile Gly Tyr Ile Val Ile Met Ala Val Leu Leu Tyr Lys Ile Thr
                  85                    90                    95
Leu Lys Ser Gly Gln Phe Ala Thr Ile Gln Asp Ser Ile Thr Ser Ile
                  100                   105                   110
Ser Gln Asp Gln Arg Ile Gln Leu Leu Leu Ile Gly Phe Ser Phe Asn
                  115                   120                   125
Ala Phe Leu Glu Gly Ala Ala Gly Phe Gly Val Pro Ile Ala Ile Cys
    130                   135                   140
Ala Leu Leu Leu Ala Gln Leu Gly Phe Arg Pro Leu Gln Ala Ala Met
145                   150                   155                   160
Leu Cys Leu Val Ala Asn Ala Ala Ser Gly Ala Phe Gly Ala Ile Gly
                  165                   170                   175
Ile Pro Val Gly Val Val Asn Thr Leu Asn Leu Pro Gly His Val Glu
                  180                   185                   190
Ala Met Gly Val Ser Gln Thr Ser Thr Leu Thr Leu Ala Ile Ile Asn
                  195                   200                   205
Phe Phe Ile Pro Phe Leu Leu Ile Phe Ile Val Asp Gly Phe Lys Gly
    210                   215                   220
Ile Lys Glu Thr Leu Pro Ser Ile Leu Val Val Ser Val Thr Tyr Thr
225                   230                   235                   240
Val Leu Gln Gly Leu Leu Thr Val Phe Asn Gly Pro Glu Leu Ala Asp
                  245                   250                   255
Ile Ile Pro Ser Leu Ala Ser Met Leu Ala Leu Ala Leu Phe Ser Lys
                  260                   265                   270
Lys Phe Gln Pro Lys Asn Ile Phe Arg Val Gln Lys Asp Val Lys Pro
                  275                   280                   285
Glu Ala Pro Lys Lys Leu Lys Gly Lys Glu Ile Leu Phe Ala Trp Ser
    290                   295                   300
Pro Phe Ile Ile Leu Thr Val Ile Val Met Ile Trp Ser Ala Pro Ser
305                   310                   315                   320
Phe Lys Ala Leu Phe Ala Pro Lys Gly Lys Leu Ser Ala Leu Val Ala
                  325                   330                   335
Asn Phe Asp Leu Pro Gly Thr Phe Ser Asn Ile Ser His Lys Pro Ile
                  340                   345                   350
Thr Leu Ser Leu Asn Leu Ile Gly Gln Thr Gly Thr Ala Ile Leu Ile
                  355                   360                   365
Thr Ile Ile Ile Thr Val Leu Met Ala Lys Lys Val Asn Phe Gly Asp
    370                   375                   380
Ala Gly Arg Leu Phe Val Glu Ala Phe Lys Glu Leu Trp Leu Pro Ile
385                   390                   395                   400
Ile Thr Ile Cys Phe Ile Leu Ala Ile Ser Lys Ile Thr Thr Tyr Gly
                  405                   410                   415
Gly Leu Ser Asn Ala Met Gly Gln Gly Ile Ser Lys Ala Gly Ser Val
                  420                   425                   430
Phe Pro Ile Leu Ser Pro Ile Leu Gly Trp Ile Gly Val Phe Met Thr
                  435                   440                   445
Gly Ser Val Val Asn Asn Asn Ser Leu Phe Ala Pro Ile Gln Ala Ser
    450                   455                   460
Val Ala Gln Gln Ile Gly Thr Ser Gly Ser Leu Leu Val Ala Ser Asn
465                   470                   475                   480
Thr Ala Gly Gly Val Ala Ala Lys Leu Ile Ser Pro Gln Ser Ile Ala
```

```
                        485                      490                      495
Ile Ala Thr Ala Ala Val Lys Glu Val Gly Lys Glu Ser Glu Leu Leu
            500                      505                      510
Lys Met Thr Leu Arg Tyr Ser Ile Gly Leu Leu Val Phe Ile Cys Ile
        515                      520                      525
Trp Thr Phe Ile Leu Ser Phe Ile Leu
    530                      535
```

<210> 5158
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5158
```
Asn Cys Val Lys Ile Leu Ser Leu Tyr Tyr Asp Ser Thr Ala Val Leu
1               5                   10                      15
Phe Val Phe Leu Arg Glu Ser Thr Lys Val Thr Thr Thr Glu Thr Thr
            20                      25                      30
Asn Ala Ile Ser Ile Pro Ile Lys
        35                      40
```

<210> 5159
<211> 74
<212> PRT
<213> S.epidermidis

<400> 5159
```
Asn Asn Pro Asn Lys Leu Glu Glu Leu Pro Leu Ala Pro Leu Leu Ser
1               5                   10                      15
Ser Ile Ala Ile Glu Asn Pro Asn Val Ala Ile Pro Val Thr Gly Ala
            20                      25                      30
Thr Lys Ile Thr Lys Pro Gln Glu Ser Ile Gln Lys Val Gln Trp Leu
        35                      40                      45
Ser Lys Val Ser Asp Thr Ile Ile Thr Pro Ile Thr Cys Ile Val Asp
    50                      55                      60
Met Ile Leu Ser Asn Ser Asn Leu Ser Ile
65                      70
```

<210> 5160
<211> 58
<212> PRT
<213> S.epidermidis

<400> 5160
```
Ile Lys Pro Asn Tyr Asn Arg His Lys Ile Lys Lys Ile Asn Leu Val
1               5                   10                      15
Asn Leu His Leu Lys Glu Ala Phe Lys Cys Leu Lys His Tyr Lys Thr
            20                      25                      30
Lys Asp Asn Ser Thr Leu Asn Leu Asn Ile Lys Arg Ser Ile Val Glu
        35                      40                      45
Lys Asp Met Val Lys Arg Asn Ala His Gly
    50                      55
```

<210> 5161
<211> 51
<212> PRT

<213> S.epidermidis

<400> 5161
Arg Ile Ile Lys Ile Asp Trp Ile Leu Ser Asn Ile Gln Asn Ile Leu
1   5   10   15
Leu Lys Gly Arg Ser Lys Leu Glu Lys Ser Val Ser Val Arg Lys Ser
            20   25   30
Ile Ile Thr Phe Tyr Cys Tyr Phe Arg Phe Ile Asn Ser Ile Trp Pro
            35   40   45
Ile Gly Tyr
    50

<210> 5162
<211> 214
<212> PRT
<213> S.epidermidis

<400> 5162
Arg Cys Val Asn Lys Lys Tyr Thr Asn Ile Phe Asn Asn Cys Val Gly
1   5   10   15
Leu Gln Phe Ile Tyr Leu Asn Phe Leu Phe Asp Leu Gly Glu Tyr Met
            20   25   30
Lys Gln Arg Ala Lys Tyr Lys Ile Ile Lys Ser Leu Ile Glu Leu Leu
            35   40   45
Glu Tyr Tyr Pro Phe Asp Glu Ile Thr Ile Lys Met Ile Cys Ala Tyr
    50   55   60
Ser Gly Val Asn Arg Ser Thr Phe Tyr Asp His Phe Gln Asp Lys Tyr
65   70   75   80
Gln Leu Leu Asp Lys Ile Gln Asn Tyr His Leu Asn Lys Tyr Ile Ser
                85   90   95
Leu Leu Gln Ser Phe Tyr Asn Asp Phe His His Ile Lys Thr Asp Gln
            100   105   110
Lys Lys Leu Tyr Lys Phe Phe Leu Leu Ile Ala Lys Tyr Ile Lys Arg
            115   120   125
Lys Glu Ala Phe Tyr Arg Ala Thr Leu Val Thr Tyr Pro Asn Lys Asp
    130   135   140
Ile Ala Leu Asp Tyr Ile Asn Ala Thr Lys Thr Cys Tyr Glu Lys Val
145   150   155   160
Met Asn Arg Tyr Glu Thr Ser Ile Asn Asn Lys Arg Met Phe Ile Ile
                165   170   175
Tyr Ser Val Gly Gly Gln Ala Gly Val Phe Ile Asp Trp Leu Arg Asn
            180   185   190
Gly Cys Ile Glu Ser Pro Gln Glu Val Ala Gln Val Leu Leu Ala Asn
            195   200   205
Thr Ile Lys Leu Gln Arg
    210

<210> 5163
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5163
Leu Val Gln Asn Asn Leu Lys Ala Cys Val Asn Leu Thr Phe Ser Leu
1   5   10   15
Ile Arg Tyr Thr Pro Phe His Phe Val Ile Lys Thr Ser Val Leu Asn

```
              20                    25                    30
Gln His Ile Ile Cys Tyr Ile Asn Lys Ser Leu Phe Leu Leu Lys Leu
          35                    40                    45
Ile Leu Lys Val
      50


<210> 5164
<211> 186
<212> PRT
<213> S.epidermidis


<400> 5164
Met Asn Lys Asn Asp Tyr Leu Lys Glu Leu Lys Lys His Leu Lys His
1               5                   10                  15
Met Asn Lys Glu Glu Lys Glu Asp Ile Leu Asn Glu Tyr Asp Thr His
              20                    25                    30
Phe Tyr Ser Gly Gln Gln Glu Gly Lys Ser Glu Ser Asp Val Cys Lys
          35                    40                    45
Glu Leu Gly Asn Pro Lys Leu Ile Gly Lys Glu Leu Thr Ala Thr Ser
      50                    55                    60
Ser Val Glu Asn Ala His Gln Lys Val Ser Leu Met Asn Ile Ser Ser
65                    70                    75                    80
Ala Ile Val Ala Val Met Gly Leu Ser Leu Leu Asn Phe Phe Ile Val
                  85                    90                    95
Ile Ile Pro Ala Phe Leu Cys Ile Leu Leu Val Leu Thr Phe Ile Ile
              100                   105                   110
Phe Thr Leu Ala Ser Leu Ala Ala Pro Leu Met Leu Leu Ile Lys Gly
          115                   120                   125
Ile Met Asp Gly Phe His Ser Ile Ile Leu Tyr Asp Ala Phe Met Thr
      130                   135                   140
Gly Leu Met Phe Gly Val Gly Leu Val Leu Ala Val Val Thr Tyr Tyr
145                   150                   155                   160
Leu Ile Lys Trp Leu Phe Asp Val Thr Met Lys Tyr Leu Lys Trp Asn
                  165                   170                   175
Ile Ser Ile Val Lys Gly Ser Val Gln Ser
              180                   185


<210> 5165
<211> 320
<212> PRT
<213> S.epidermidis


<400> 5165
Leu Ile Lys Asn Gln Gly Gly Tyr Ile Met Tyr Gln Leu Ala Gln Ser
1               5                   10                  15
Asn Leu Trp Thr Gly Arg Leu Asp Ser Glu Thr Asp Pro Thr Gln Phe
              20                    25                    30
Arg His Phe Gln Thr Val Lys Phe Gly Asp Leu Ser Gln Leu Asp Phe
          35                    40                    45
Ser Asp Glu His Lys Gly Val Gly Leu Leu Gly Tyr Ala Ile Asp Lys
      50                    55                    60
Gly Val Glu Leu Asn Lys Gly Arg Val Gly Ala Lys Glu Gly Pro Asn
65                    70                    75                    80
Ala Ile Lys Arg Ala Phe Ala Gly Leu Pro Asp Leu Asn Gln Cys Glu
                  85                    90                    95
Glu Ile Ile Asp Tyr Gly Asn Val Glu His Asn His Glu Leu Leu Ile
```

```
                100                      105                      110
Asp Thr Gln Arg Glu Phe Ala Asp Leu Ala Ala Lys Ser Ile Lys Arg
        115                      120                      125
His Lys Gln Thr Phe Leu Leu Gly Gly Gly His Asp Ile Ala Tyr Ala
    130                      135                      140
Gln Tyr Leu Ala Thr Arg Lys Val Tyr Pro Glu Ser Ser Ile Gly Val
145                      150                      155                      160
Ile Asn Ile Asp Ala His Phe Asp Thr Arg Asp Glu Gly Tyr Ser Thr
                165                      170                      175
Ser Gly Thr Ser Phe Arg Gln Ile Leu Glu Glu Asp Asp Asn Ala Asp
        180                      185                      190
Tyr Leu Val Leu Gly Ile Ser Gln Gly Gly Asn Thr Gln Ala Leu Phe
        195                      200                      205
Asn Tyr Ala Lys Glu Lys Asp Ile Gln Phe Val Tyr Ala Asp Glu Leu
    210                      215                      220
Leu His Gln Val Ser Pro Pro Ile Lys Asp Met Ile Glu Arg Phe Ile
225                      230                      235                      240
His Asn His Asp Thr Val Met Phe Thr Ile Cys Met Asp Val Val Asp
                245                      250                      255
Ser Ala Phe Ala Pro Gly Val Ser Ala Pro Ala Val Leu Gly Ile Tyr
                260                      265                      270
Pro His Thr Val Phe Glu Leu Ala Lys Arg Val Ile Pro Ser Glu Lys
        275                      280                      285
Val Lys Ser Ile Ser Ile Ala Glu Met Asn Pro Thr Tyr Asp Ser Asp
    290                      295                      300
Gln Arg Thr Ala Lys Leu Val Ala Asn Leu Val His His Cys Leu Ile
305              .       310                      315                      320
```

<210> 5166
<211> 300
<212> PRT
<213> S.epidermidis

<400> 5166
```
Leu Met Lys Asn Arg Met Met Asn Arg Val Val Asn Lys Tyr Ile Leu
1                   5                        10                       15
His Asn Arg Ser Ile Phe Phe Ser Asn Asp Asp Glu Val Lys His Phe
            20                       25                       30
Leu Glu Lys Arg Ser Ile Glu Asn Ser Lys Lys His Gln Gln Pro Ala
        35                       40                       45
Thr Leu Asn Val Lys Ser Asn Leu Asp Lys Leu Thr Leu Asn Asp Met
        50                       55                       60
Gln Val Phe Arg Phe Asn Phe Arg His Glu Lys Asn Gln Lys Ile Leu
65                       70                       75                       80
Tyr Leu His Gly Gly Tyr Asn Thr Leu Gln Pro Ser Pro Phe His Trp
                85                       90                       95
Arg Leu Leu Asp Lys Leu Thr Leu Asn Thr Leu His Glu Val Val Leu
            100                      105                      110
Pro Ile Tyr Pro Lys Ser Pro Asp Tyr His Tyr Leu Glu Thr Phe Lys
        115                      120                      125
Ala Ile Arg Asp Val Tyr Asn Gln Leu Val Glu Glu Val Gly Ala Asn
    130                      135                      140
Asn Ile Val Met Met Gly Asp Gly Ser Gly Gly Gly Leu Ala Leu Ser
145                      150                      155                      160
Phe Val Gln Ser Leu Ile Asn Asp Asn Gln Glu Val Pro Arg Lys Leu
                165                      170                      175
```

```
Phe Leu Leu Ser Pro Leu Leu Asp Ala Thr Leu Thr Asn Pro Asn Ile
            180                 185                 190
Thr Lys Thr Leu Glu Glu Asn Asp Ile Leu Val Ser Arg Phe Gly Val
            195                 200                 205
His Gln Leu Met Lys Ser Trp Thr Asn Asp Leu Pro Leu Ser Asp Ala
            210                 215                 220
Arg Ile Ser Pro Leu Tyr Gly Thr Leu Lys Gly Leu Pro Pro Ile Tyr
225                 230                 235                 240
Met Tyr Gly Gly Gly Arg Glu Ile Leu Ser Pro Asp Met His Ala Phe
                245                 250                 255
Thr His Ala Leu Glu Glu Cys Gly Asn Asp Val Glu Phe Lys Glu Tyr
            260                 265                 270
Pro Lys Met Val His Asp Phe Pro Ile Tyr Pro Ile Arg Gln Ser His
            275                 280                 285
Lys Val Leu Lys His Ile Thr Lys Ser Ile Leu Glu
            290                 295                 300
```

<210> 5167
<211> 205
<212> PRT
<213> S.epidermidis

<400> 5167
```
Leu Ile Val Lys Lys Ile Lys Ala Glu Thr Leu Ser Asp Met Gln Asn
1               5                   10                  15
Tyr Lys Leu Leu Ser Gly Ser Ile Ile Pro Arg Pro Ile Ala Phe Val
            20                  25                  30
Thr Thr Gln Asn Leu Lys Gly Asp Ile Asn Ala Ala Pro Phe Ser Phe
            35                  40                  45
Phe Asn Val Val Asn His Thr Pro Pro Met Ile Ala Ile Ala Val Gln
            50                  55                  60
Arg Thr Lys Gly Asn Arg Lys Asp Thr Ser Ile Asn Ile Glu Gln Ser
65                  70                  75                  80
Gly Glu Phe Val Val His Ile Thr Asp Glu Ala Ile Val Asn Asp Val
                85                  90                  95
Asn Glu Thr Ala Ala Pro Leu Glu Tyr Gly Val Asn Glu Leu Lys Arg
            100                 105                 110
Thr Ser Leu Ser Met Ile Asp Ser Asp Leu Ile Lys Val Pro Ala Ile
            115                 120                 125
Lys Glu Ala Lys Val Arg Phe Glu Cys Lys Leu His Gln Ile Val Gln
            130                 135                 140
Leu Gly Asn Lys Asp Asn Gly Ser Asp Leu Ile Ile Gly Glu Ile Val
145                 150                 155                 160
Val Tyr His Ile Asp Glu Glu Val Tyr Phe Glu Asp Ser Lys Ile Asp
                165                 170                 175
Ala Asn Gln Leu Asn Pro Val Ala Arg Leu Ala Gly Asn Asp Tyr Ser
            180                 185                 190
Leu Leu Gly Gln Thr Phe Thr Val Asn Arg Pro Thr Ser
            195                 200                 205
```

<210> 5168
<211> 240
<212> PRT
<213> S.epidermidis

<400> 5168

```
Tyr Tyr Ala Leu Phe Asn Ile Leu Ile Glu Ile Gln Phe Asn Met Ile
1               5                   10                  15
Lys Arg Gln Ser Arg Arg Arg Phe Gln Met Lys Lys Val Leu Ala Ser
            20                  25                  30
Ala Thr Ile Leu Ser Leu Met Leu Val Gly Cys Ser Asn Gly Gly Asn
        35                  40                  45
Asp Glu Ser Ser His Lys Asp Asp Ser Ser Lys Thr Glu Gln Lys Asp
    50                  55                  60
Lys Ser Ser Ser Gln His Asp Ser Lys Lys Asp Ser Lys Arg Asn Asp
65                  70                  75                  80
Thr Asn Asn Lys Gln Asp Asn Gln Glu Asn Asn Thr Asn Lys Glu Gln
                85                  90                  95
Thr Asn Asn Gln Asn Pro Asn Asp Gly Glu Gln Arg Thr Ser Glu Arg
            100                 105                 110
Pro Thr Thr Asn Ser Asn Gly Asn Ser Ser Asp Asn Gln Asn Lys Gln
            115                 120                 125
Gln Gln Ser Val Gln Asp Asn Gln Asn Lys Tyr Val Ala Pro Tyr Gln
    130                 135                 140
Ser Glu Asn Ala Thr Arg Val Ala Arg Cys Leu Ser Pro Phe Glu Gly
145                 150                 155                 160
Asp Arg Ser Gln Ala Leu Gln Gln Leu Pro Asn Phe Glu Thr Ala Leu
                165                 170                 175
Ser Ile Ala Lys Asn Glu Ala Asn Met Tyr Gly Ser Glu Asn Lys Ser
            180                 185                 190
Tyr Asn Asp Tyr Ser Ile Glu Gln Thr Glu Asp Gly Phe Arg Tyr Val
            195                 200                 205
Phe Ser Phe Lys Asp Pro Ser Lys Ser Asn Thr Tyr Ser Ile Val Thr
    210                 215                 220
Leu Asn Arg Gln Gly Gln Pro Thr Val Val Asp Pro Asn Phe Gln Pro
225                 230                 235                 240
```

<210> 5169
<211> 359
<212> PRT
<213> S.epidermidis

<400> 5169
```
His Ile Lys Lys Trp Glu Arg Ile Ser Met Asn Leu Ala Trp Lys Glu
1               5                   10                  15
Ile Lys Phe Tyr Lys Phe Arg Phe Ile Leu Ile Met Phe Ile Ile Phe
            20                  25                  30
Leu Met Ala Ile Met Val Leu Phe Ile Ser Gly Leu Ala Gln Gly Leu
        35                  40                  45
Ala Arg Glu Asn Ile Ser Ile Phe Asp Gln Ile Lys Gly Asn Gln Phe
    50                  55                  60
Val Val Gln Lys Met Lys Glu Pro Gln Leu Glu Lys Ser Ile Leu Ser
65                  70                  75                  80
Arg Ser Lys Gln Asp Asn Ile Ser Lys Ile Ile Asp Glu Lys Pro Phe
            85                  90                  95
Lys Met Ala Gly Lys Thr Phe Lys Ile Asn Gly Asn Glu Glu Asn Val
            100                 105                 110
Met Ala Ile Asn Ser Val Lys Asn His Gln Pro Asn Leu Lys Ser Gly
        115                 120                 125
His Tyr Pro Lys Asn Gly Asn Gln Ile Ala Ile Asn Glu Lys Leu Thr
    130                 135                 140
Ala Glu Gly Leu Tyr Leu Asp Asp Lys Val Lys Val Lys Gly Asp Asp
```

```
145                     150                     155                     160
Thr Thr Tyr Lys Val Val Gly Ile Leu Lys Asn Thr Met Tyr Ser His
                165                     170                     175
Ser Asn Ile Val Met Met Asp Gln Ser Lys Ile Glu Gln Ser Ser Asn
                180                     185                     190
Val Ala Thr Phe Tyr Val Thr Asn Gln Leu Ser Lys Ser Asp Lys Asn
                195                     200                     205
Lys Ile Asn His Ile Lys Gly Val Gln Thr Ala Thr Thr Asp Asn Ile
        210                     215                     220
Thr Ser Asn Ile Ala Ser Tyr Lys Ala Glu Gln Thr Pro Leu Asp Met
225                     230                     235                     240
Met Ile Ile Ser Leu Tyr Ile Ile Thr Ala Ile Val Leu Ser Ala Phe
                245                     250                     255
Phe Tyr Val Met Thr Ile Gln Lys Thr Ser Glu Ile Gly Ile Leu Lys
                260                     265                     270
Ala Ile Gly Ile Thr Thr Lys His Leu Leu Thr Ser Leu Ile Leu Gln
                275                     280                     285
Ile Ser Met Ile Thr Phe Ile Gly Val Ala Ile Ala Glu Val Val Ile
                290                     295                     300
Leu Leu Ile Ser Gln Ile Leu Pro Val Ser Met Pro Phe His Ile Asp
305                     310                     315                     320
Met His Asn Ile Ile Ile Val Leu Val Ile Phe Met Ile Val Gly Leu
                325                     330                     335
Ile Gly Thr Ser Leu Ser Phe Ile Lys Leu Ile Lys Ile Asp Pro Ile
                340                     345                     350
Glu Ala Ile Gly Gly Gly Gln
                355
```

<210> 5170
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5170
```
Thr Met Asn Leu Ile Glu Phe Ile Asn Asp Leu Ala Lys Asn Asn Ile
1               5                       10                      15
Ile Ile Cys Val Met His Met Ile Ile Ile Tyr Ser Ile Phe Cys
                20                      25                      30
His Ser Ser Gly Tyr Gly Lys Cys Leu Val His Leu Phe Asn Leu Leu
        35                      40                      45
Ser Tyr Asn Thr Ile Leu Thr Glu Lys Ser Thr Tyr Met
        50                      55                      60
```

<210> 5171
<211> 378
<212> PRT
<213> S.epidermidis

<400> 5171
```
Glu Arg Ala Glu Arg Tyr Met Thr Asn Tyr Ser Thr Tyr Val Asp Trp
1               5                       10                      15
Arg Arg Thr Phe His Gln Tyr Pro Glu Leu Ser Asp Glu Glu Tyr Glu
                20                      25                      30
Thr Thr Glu Lys Leu Arg Lys Ile Leu Lys Ser Tyr Gly Ile Arg Ile
        35                      40                      45
Leu Glu Val Pro Leu Lys Thr Gly Leu Val Ala Glu Ile Gly Gln Gly
```

```
        50                          55                          60
Glu Glu Met Ile Ala Val Arg Thr Asp Ile Asp Ala Leu Pro Ile Glu
65                          70                          75                          80
Glu Gln Val Lys His Glu Phe Thr Ser Lys Tyr Gln Gly Ala Met His
                        85                          90                          95    ·
Ala Cys Gly His Asp Ile His Met Ala Ser Ile Leu Ala Thr Gly Ile
                    100                         105                         110
Gln Leu Lys Glu Ile Glu Asp Glu Leu Asn Gly Arg Val Arg Leu Ile
                115                         120                         125
Phe Gln Pro Ala Glu Glu Leu Gly His Gly Ala Phe Glu Ile Ile Asn
            130                         135                         140
Thr Gly Val Leu Lys Gly Ala Lys Ala Val Leu Gly Phe His Asn Tyr
145                         150                         155                         160
Pro Thr Leu Lys Val Gly Glu Phe Ala Ile Lys Ser Gly Ala Ile Thr
                    165                         170                         175
Ser Ala Val Asp Arg Phe Glu Phe Asn Val Lys Gly Lys Gly Ala His
                180                         185                         190
Ala Ala Lys Pro Glu Gln Gly Asn Asp Pro Val Ile Val Val Gly Gln
            195                         200                         205
Leu Ile Asn Ser Leu Gln Thr Ile Val Ser Arg Asn Leu Ser Ala Phe
        210                         215                         220
Asp Ser Ala Val Val Thr Ile Gly Glu Ile Ser Cys Gly Asn Thr Trp
225                         230                         235                         240
Asn Val Ile Ala Asp Lys Ala Tyr Ile Gln Gly Thr Val Arg Ser Phe
                    245                         250                         255
Asp Glu Asp Ile Arg His Tyr Ile Glu Asn Arg Met Lys Asn Ile Ala
                260                         265                         270
Asp Gly Leu Ser Arg Val Phe Asn Val Asp Ile Asp Leu Thr Tyr Ser
            275                         280                         285
Arg Leu Pro Gly Ala Val Val Asn Asp Ala His Leu Thr Gln Glu Ala
        290                         295                         300
Ile Glu Val Ala Lys Asn Val Gly Tyr His Val Ser Met Leu Asp Glu
305                         310                         315                         320
Pro Val Thr Ile Gly Glu Asp Phe Ser Gly Tyr Thr Glu Glu Tyr Pro
                    325                         330                         335
Gly Val Phe Ala Phe Ile Gly Ser Asp Ser Lys Tyr Asp Leu His His
                340                         345                         350
Pro Lys Tyr His Pro Asp Glu Arg Ile Leu Glu Lys Val Pro Gln Tyr
            355                         360                         365
Phe Val Gln Leu Val Gln Arg Leu Leu Thr
        370                         375
```

<210> 5172
<211> 286
<212> PRT
<213> S.epidermidis

<400> 5172
```
Cys Asp Tyr Glu Ile Ser Lys Met Glu Tyr Leu Tyr Cys Gln Arg Lys
1                   5                           10                          15
Cys Thr Ile Met Lys Lys Ile Ala Ala Ile Ile Phe Leu Ile Gly Leu
                20                          25                          30
Ser Leu Ile Ile Ile Cys Ser Val Gly Val Tyr Ala Gln Asn Lys Lys
            35                          40                          45
Leu Ser Lys Asp Asn Gln Tyr Asn Asn Gln Thr Thr Asn Leu Met Lys
        50                          55                          60
```

```
Asn Tyr Asp Asp Asn Thr Val Lys Ser Ile Tyr Ile Asp Gly Lys Val
65                  70                  75                  80
Ser Asp Ile Thr Val Lys Lys Gly Lys His Phe Ser Val Lys Ser Lys
                85                  90                  95
Gly Asn Asp Lys Asn Leu Asn Val Thr Ser Lys Val Asn Asn Gln Arg
            100                 105                 110
Trp Val Ile Thr Glu Arg Gln Thr Ser Pro His Ile Asn Phe Arg Ile
            115                 120                 125
Gln Gly Lys Val Ser Asn His Ile Thr Ile Thr Val Pro Lys Tyr Ile
            130                 135                 140
Lys Asn Ile Asp Ile Lys Thr Asn Ala Gly Asp Leu Asn Ile Val Gly
145                 150                 155                 160
Val Asn Ser Gly Thr Gly Arg Phe Asp Ala Glu Ser Gly Asp Ile Lys
                165                 170                 175
Val Gln Lys Gly Arg Tyr Lys Lys Val Thr Leu His Asn Glu Asp Gly
            180                 185                 190
Asp Ile His Thr Lys Asp Ile His Phe Asn Gln Ala Asn Ile Gln Asn
            195                 200                 205
Asp Asn Gly Asp Ile Gln Met Lys Gln Leu Asp Pro Asp Ile Pro Leu
            210                 215                 220
Arg Ile Lys Asn Glu Glu Gly Asp Ile Asn Leu Asn Tyr Lys Lys Glu
225                 230                 235                 240
Leu His His Thr Gln Ile Ile Thr Arg Asn Glu Glu Gly Glu Thr Asp
                245                 250                 255
Ile Asp His Arg Val Leu Tyr Asn Ser Lys Val Glu Asn Gly Asn Asn
            260                 265                 270
Lys Val Lys Leu Ile Asn Glu Asn Gly Asp Ile Lys Val Lys
            275                 280                 285
```

```
<210> 5173
<211> 397
<212> PRT
<213> S.epidermidis
```

```
<400> 5173
Cys Tyr Asn Asp Leu Asn Ile Ile Glu Asn Asn Glu Val Phe Tyr Ala
1               5                   10                  15
Met Lys Ser Phe Thr Phe Phe Met His Asn Ile Tyr Ala Met Gly Gly
            20                  25                  30
Thr Val Lys Ser Val Thr Gln Leu Ala Asn Thr Leu Ala Glu Lys Gly
            35                  40                  45
His Pro Val Thr Ile Ile Ser Val Phe Arg Gly Ala Asp Ser Pro Tyr
        50                  55                  60
Phe Glu Leu His Ser Ala Ile Lys Val Lys Val Val Val Asp Tyr Arg
65                  70                  75                  80
Leu Lys Leu Lys Asn Thr Arg Ala Ile Thr Ala Asn Arg Ile Lys Lys
                85                  90                  95
Tyr Thr Pro Phe Leu Asn Thr Lys Val Ile Ser Gln Phe Glu Pro Gly
            100                 105                 110
Lys Ser Gln Phe Ser Ser Tyr Val Glu Lys Lys Met Ile Lys Ala Ile
            115                 120                 125
Arg His Thr Lys Thr Asp Val Leu Val Gly Thr Arg Ala Ser Phe Asn
            130                 135                 140
Ile Leu Ile Ser Lys Tyr Ala Lys Ala Glu Ile Val Thr Ile Ala Met
145                 150                 155                 160
Glu His Met Asn Phe Asp Ala His Pro Asp Gln Tyr Gln Lys Glu Ile
```

```
                        165                    170                    175
Ile Ala Ala Tyr Arg Asn Ile Asn Lys Ile Thr Thr Leu Thr Val Ala
                180                    185                    190
Asp Gln Gln Lys Tyr Gln Ser Gln Leu Lys Thr Pro Val Tyr Val Ile
            195                    200                    205
Pro Asn Met Val Thr Glu Lys Arg Ile Ala Ala Pro Lys Lys Asn Arg
        210                    215                    220
Ile Ile Ser Ala Gly Arg Leu Glu Tyr Glu Lys Gly Tyr Asp Leu Leu
225                    230                    235                    240
Leu Glu Ser Ile Arg Leu Ile Gln Glu Asp Leu Arg Gln Leu Asn Tyr
                245                    250                    255
Asp Val His Ile Tyr Gly Ser Gly Ser Lys Lys Thr Ser Leu Val Asp
                260                    265                    270
Phe Ile Asn Gln Tyr His Leu Asn Asp Leu Ile Lys Ile Tyr Glu Pro
            275                    280                    285
Thr Gln Glu Leu Asn Asn Lys Leu Ala Gln Ser Lys Ile Val Val Val
            290                    295                    300
Pro Ser Arg Asn Glu Gly Phe Gly Met Ile Ile Leu Glu Ala Met Val
305                    310                    315                    320
Gln Asp Asn Ile Val Ile Ser Phe Glu Gly Asn Val Gly Pro Asp Ser
                325                    330                    335
Ile Ile Asn Asn Gly Asp Asn Gly Tyr Leu Val Asn Tyr Glu Asn Val
                340                    345                    350
Ser Glu Leu Ala Lys Arg Ile Asp Leu Thr Thr Gln His Tyr Asn Glu
            355                    360                    365
Leu Asp His Ile Ile Glu Asn Ser Lys Asp Thr Leu Lys Gln Phe Ser
370                    375                    380
Pro Asp His Ile Tyr Gln Leu Phe Met Ser Met Phe Lys
385                    390                    395
```

<210> 5174
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5174
```
Met Asn Ala Glu Ser Ser Phe Ile Leu Thr Ile Leu Asn Glu Ser Asn
1                    5                    10                    15
Ile Ala Thr Asn Ile Ala Asn Lys Arg Pro Pro Met Thr Gly Ala Gly
                20                    25                    30
Ile Gln Ile Arg Leu Lys Ile Glu Thr Trp Leu Ile Ile Val
            35                    40                    45
```

<210> 5175
<211> 460
<212> PRT
<213> S.epidermidis

<400> 5175
```
Glu Val Lys Asp Ile Gly Trp Thr Lys Met Phe Lys Thr Leu Tyr Ser
1                    5                    10                    15
Arg Ile Ala Ile Tyr Ala Ile Thr Val Ile Leu Phe Ser Ala Leu Met
                20                    25                    30
Ser Phe Leu Phe Thr Asn Ile Tyr Tyr His Phe His Leu Lys Ala Ser
            35                    40                    45
Asn Asp Ala Lys Ile Met Arg Thr Leu Lys Glu Ala Arg Glu Tyr Glu
```

```
            50                        55                        60
Arg Thr Gln Lys Pro Lys Pro Leu Asp Thr Tyr Leu Lys His Leu Gly
65                        70                        75                        80
Gln Met Asn Tyr Gln Ile Met Thr Val Asn Glu His Gly Thr Lys His
                        85                        90                        95
Phe Tyr Gly Glu Thr Phe Arg Lys Asn Thr Ile Ser Gln Ser Ala Ile
                        100                       105                       110
Lys Lys Val Leu Asn Gly Glu Asp Tyr His Gly Ile Lys Asn Lys Pro
                        115                       120                       125
Tyr Ala Phe Phe Val Thr Gly Phe Phe Asp Asn Glu Thr Asp Asn Thr
                        130                       135                       140
Val Gly Ile Gln Phe Lys Thr Asp Asp Gly Ala Leu Ala Val Phe Met
145                       150                       155                       160
Arg Pro Asp Ile Gly Glu Thr Phe Ser Glu Phe Arg Ile Phe Leu Ala
                        165                       170                       175
Val Leu Ile Thr Leu Leu Leu Ile Ile Ser Ile Ser Leu Val Ile Ala
                        180                       185                       190
Ser Thr Tyr Ser Ile Ile Lys Pro Val Thr Ala Leu Lys Asn Ala Thr
                        195                       200                       205
Thr Arg Ile Met Lys Gly Asp Phe Ser Thr Pro Ile Lys Gln Thr Arg
                        210                       215                       220
His Asp Glu Ile Gly Thr Leu Gln Ser Arg Phe Asn Thr Met Arg Gln
225                       230                       235                       240
Asn Leu Gly Gln Val Asp Gln Met Arg Gln His Phe Val Gln Asn Val
                        245                       250                       255
Ser His Glu Val Lys Thr Pro Leu Thr His Leu Gln Arg Leu Leu Thr
                        260                       265                       270
Gln Leu Glu Leu Thr Gln Asn Glu Glu Glu Lys Gln Leu Cys Ile Asn
                        275                       280                       285
Glu Met Phe Glu Ile Thr Asn Gln Val Ser Glu Leu Thr Lys Glu Leu
                        290                       295                       300
Leu Leu Leu Ser Glu Leu Asp Asn Ala Ser His Leu Thr Phe Asn Asp
305                       310                       315                       320
Asn Val His Leu Asn Thr Leu Ile Lys Asp Ile Ile Arg His Glu Gln
                        325                       330                       335
Phe Arg Thr Asp Glu Lys Asp Leu Val Met Phe Thr Glu Leu Glu Asp
                        340                       345                       350
Leu Tyr Phe Arg Gly Asn Glu Arg Leu Leu His Gln Ala Phe Asn Asn
                        355                       360                       365
Leu Ile Ile Asn Ala Met Asn Tyr Ala Pro Gln Asn Ser Met Ile Asn
                        370                       375                       380
Ile Thr Leu Thr Ser Thr Asn His Leu Ile Ile Phe Asn Ile Glu Asn
385                       390                       395                       400
Asp Gly Ser Ile Ala Glu Glu Asp Ala Lys His Ile Phe Asp Arg Phe
                        405                       410                       415
Tyr Lys Leu Ser Asp Glu Ser Ser Asn Gly Leu Gly Leu Ala Ile
                        420                       425                       430
Thr Gln Ser Ile Ile His Leu His His Gly Ser Ile Thr Leu Thr Ser
                        435                       440                       445
Asp Asp Lys Thr Gln Phe Ile Val Lys Leu Phe Ile
                        450                       455                       460
```

<210> 5176
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5176

```
Leu Ser Ser Leu Leu Ile Leu Val Ile Pro Ser Leu Phe Phe Met Leu
1               5                   10                  15
Tyr Asp Asp Arg Lys Ile His Val Tyr Ser Lys Pro Glu Phe Ile Lys
            20                  25                  30
Arg His Gln Val Asn Lys Asn Gln
            35                  40
```

<210> 5177
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5177

```
Ala Gly Gly Leu Leu Tyr Gly Ile Lys Ile Ile Phe Phe Thr Gln Leu
1               5                   10                  15
Lys Asp Phe Val Phe Met Met Gly Asn Ser Ile His Arg Met Tyr Ile
            20                  25                  30
Ser His Phe Phe Trp Leu Gly Leu Ile
            35                  40
```

<210> 5178
<211> 292
<212> PRT
<213> S.epidermidis

<400> 5178

```
Ile Phe Ser Trp Lys Ser Glu Ala Lys Asp Val Asp Thr Ser Ser Pro
1               5                   10                  15
Phe Tyr Glu Lys Ser Lys Phe Trp Phe Gly Leu Leu Arg Tyr Val Thr
            20                  25                  30
Glu Gly Ala Asn Phe Leu Leu Ile Gly Leu Phe Trp Leu Asn Gly Ile
        35                  40                  45
Ala Arg Lys Arg Gly Leu Arg Gln Phe Asn Val Leu Pro Lys Gln Ser
    50                  55                  60
Gly Ile Ala Trp Ile Met Ala Met Ser Leu Leu Val Ser Leu Val Val
65                  70                  75                  80
Tyr Met Met Thr Leu Thr Ser Asp Ile Leu Glu Asp Ile Leu Ser Phe
                85                  90                  95
Lys Leu Glu Val Ile Met Gln Phe Pro Tyr Ile Leu Ser Ser Ile Ser
            100                 105                 110
Leu Ile Ile Leu Phe Ile Leu Phe Ile Leu Lys Asp Met Glu Lys Ile
            115                 120                 125
Trp Tyr Trp Leu Ile Ser Ile Val Met Ile Ala Val Ile Ser Met Ser
    130                 135                 140
Gly His Val Trp Ser Gln Gln Val Pro Leu Trp Ser Ile Ile Ile Arg
145                 150                 155                 160
Thr Ile His Leu Ile Gly Leu Thr Leu Trp Leu Gly Ser Leu Val Tyr
                165                 170                 175
Leu Ile Cys Tyr Ala Ile Lys Val Lys Ile Asn Gln Leu Thr Ser Val
            180                 185                 190
Arg Arg Met Leu Leu Lys Val Asn Ile Ile Ala Val Ile Met Leu Val
        195                 200                 205
Phe Thr Gly Ile Leu Met Ala Ile Asp Glu Thr Asn Thr Leu Thr Leu
    210                 215                 220
```

```
Trp Asn Asn Val Ser Ala Trp Ser Ile Tyr Leu Val Ile Lys Ile Ala
225                 230                 235                 240
Gly Ile Ile Ala Met Met Leu Leu Gly Phe Tyr Gln Thr Met Arg Ala
                245                 250                 255
Leu Arg Gln Arg Gln Gln Val .His Arg Phe Ala Leu Met Thr Glu Leu
            260                 265                 270
Leu Ile Gly Met Ile Leu Ile Phe Ala Gly Ile Met Met Ser Gln Ile
            275                 280                 285
Asn Ile Pro Ser
        290


<210> 5179
<211> 54
<212> PRT
<213> S.epidermidis


<400> 5179
Leu Lys Leu Cys Met Leu Lys Ile Leu Tyr Val Ser Thr Tyr Val Asn
1               5                   10                  15
Asn Tyr Leu Asn Asp Ser Tyr His Cys Gly Thr Ser Tyr Ala Ala Met
            20                  25                  30
Tyr Asp Cys Ile Asn Ala Asp Met Phe Ile His Phe Asn Phe Asn His
        35                  40                  45
Gly Ile Val Asp Ser Asn
        50


<210> 5180
<211> 301
<212> PRT
<213> S.epidermidis


<400> 5180
Ala Ile Trp Trp Tyr Pro Tyr Leu Gly Ala Ala Leu Gly Met Ile Leu
1               5                   10                  15
Val His Pro Gly Leu Met Ser Ala Tyr Asp Phe Pro Lys Ala Val Glu
            20                  25                  30
Glu Gly Lys Ala Ile Pro His Trp Asp Val Phe Gly Leu His Ile Asn
        35                  40                  45
Glu Val Gly Tyr Gln Gly Gln Val Leu Pro Met Leu Val Ala Thr Tyr
        50                  55                  60
Ile Leu Ala Thr Ile Glu Lys Trp Leu Arg Lys Val Ile Pro Thr Val
65                  70                  75                  80
Leu Asp Asn Leu Leu Thr Pro Leu Leu Ser Ile Phe Ile Thr Ala Phe
                85                  90                  95
Ile Thr Phe Leu Phe Val Gly Pro Val Thr Arg Gln Leu Gly Tyr Trp
            100                 105                 110
Leu Ser Asp Gly Leu Thr Trp Leu Tyr Glu Phe Gly Gly Ala Ile Gly
        115                 120                 125
Gly Leu Ile Phe Gly Leu Leu Tyr Ala Pro Ile Val Ile Thr Gly Met
        130                 135                 140
His His Ile Phe Ile Ala Val Glu Thr Thr Leu Ile Ala Asp Ala Thr
145                 150                 155                 160
Lys Thr Gly Gly Ser Phe Ile Phe Pro Ile Ala Thr Met Ser Asn Ile
                165                 170                 175
Ala Gln Gly Gly Ala Ala Leu Ala Ala Phe Phe Ile Ile Lys Gln Asn
            180                 185                 190
```

```
Lys Lys Leu Lys Gly Val Ala Ser Ala Ala Gly Ile Ser Ala Leu Leu
        195                 200                 205
Gly Ile Thr Glu Pro Ala Met Phe Gly Val Asn Leu Lys Leu Arg Tyr
        210                 215                 220
Pro Phe Ile Gly Ala Val Ala Gly Ser Gly Ile Gly Ala Ala Tyr Ile
225                 230                 235                 240
Ser Phe Phe Lys Val Lys Ala Ile Ala Leu Gly Thr Ala Gly Leu Pro
                245                 250                 255
Gly Phe Ile Ser Ile Asn Pro Thr His Ala Gly Trp Leu His Tyr Leu
                260                 265                 270
Ile Gly Met Leu Ile Ala Phe Val Val Ser Val Val Val Thr Leu Val
                275                 280                 285
Leu Ser Arg Arg Lys Thr Asn Lys Thr Ala Val Glu Ser
        290                 295                 300


<210> 5181
<211> 40
<212> PRT
<213> S.epidermidis


<400> 5181
Gln Tyr Val Ser Glu Thr Leu Leu Ile Lys Val Glu Phe Lys Lys Ser
1                   5                   10                  15
Tyr Ile Ala Ile Phe Lys Tyr Lys Val Phe Asp Met Phe Ser Gln Lys
                20                  25                  30
Ala Thr Pro Leu Trp Gln Thr Ser
        35                  40


<210> 5182
<211> 179
<212> PRT
<213> S.epidermidis


<400> 5182
Met Gly Glu Arg Ile Arg Ser Val Gln Ile Thr Glu Val Glu Gln Leu
1                   5                   10                  15
Gln Leu Ile Ala Lys Arg Thr Phe Phe Thr Thr Phe Arg Glu Ser Tyr
                20                  25                  30
Ser Asp Glu Asp Phe Lys Gln Phe Phe Ser Asp Ala Tyr Asp Ile Asp
        35                  40                  45
Val Leu Arg Lys Glu Leu Glu Gln Ser Asn Ser Phe His Tyr Phe Tyr
        50                  55                  60
Glu Val Asp Gln Asn Ile Val Gly Phe Leu Lys Leu Asn Ile Asn Asp
65                  70                  75                  80
Ala Gln Thr Glu Asn Lys Gly His Ala Tyr Leu Glu Ile Gln Arg Ile
                85                  90                  95
Tyr Phe Asp Glu Ala Phe Gln Gly Ser Gly Arg Gly Gln Leu Phe Ile
                100                 105                 110
Asn Leu Ala Ile Asp Gln Ala Ile Lys Phe Gly Lys Ser Lys Ile Trp
        115                 120                 125
Leu Gly Val Trp Glu His Asn Pro Lys Ala Leu Ser Phe Tyr Lys Asn
        130                 135                 140
Arg Gly Phe Arg Val Thr Gly Ser His Gln Phe Tyr Thr Gly Ser Val
145                 150                 155                 160
Val Asp Asn Asp Leu Ile Met Glu Leu Asp Leu Thr Thr Asn Tyr Lys
                165                 170                 175
```

Gln Ser Leu

<210> 5183
<211> 229
<212> PRT
<213> S.epidermidis

<400> 5183
Ser Tyr Trp Arg Trp Pro Ile Met Gly Leu Val Val Lys Asp Ile Ser
1   5   10   15
Lys Thr Phe Gly Glu Lys Thr Ser Lys Thr Glu Val Leu Lys Asp Ile
            20   25   30
Asn Phe Glu Val Lys Asp Gly Glu Phe Ile Ile Leu Asn Gly Ala Ser
            35   40   45
Gly Ser Gly Lys Thr Thr Leu Leu Thr Ile Leu Gly Gly Leu Leu Ser
            50   55   60
Gln Thr Ser Gly Asp Val Val Tyr Glu Gly Lys Ser Leu Phe Glu Arg
65   70   75   80
His Thr Asn Lys Ala His Leu Arg Leu Asn Asp Ile Gly Phe Ile Phe
                85   90   95
Gln Ala Ser His Leu Val Pro Tyr Leu Lys Val Leu Asp Gln Leu Thr
            100   105   110
Leu Ile Gly Lys Glu Thr Gly Met Ser Ser Lys Glu Ala Gln Ala Arg
            115   120   125
Ala Lys Glu Leu Leu Lys Lys Ile Gly Leu Glu Glu Gln Leu Asn Ser
            130   135   140
Tyr Pro His Met Leu Ser Gly Gly Gln Gln Gln Arg Val Ala Ile Met
145   150   155   160
Arg Ala Leu Met Asn His Pro Lys Ile Val Leu Ala Asp Glu Pro Thr
                165   170   175
Ala Ser Leu Asp Ala Ser Arg Ala Gln Glu Val Val Glu Met Ile Arg
            180   185   190
Lys Gln Ile Lys Ala Asn Gln Met Ile Gly Ile Met Ile Thr His Asp
            195   200   205
Glu Ser Leu Phe Lys Tyr Ala Asp Arg Ile Val Gln Leu Tyr Asp Gly
            210   215   220
Lys Ile Lys Asn Ser
225

<210> 5184
<211> 54
<212> PRT
<213> S.epidermidis

<400> 5184
Glu Arg Leu Gly Gly Tyr Phe Tyr Lys Lys Asp Lys Leu Tyr Ile Ile
1   5   10   15
Ser Ile Glu Phe Val Phe Phe Thr Tyr Pro Glu Thr Leu Cys Leu Gly
            20   25   30
Ile Ile Asn Lys Arg Asp Asp Ser Arg Ile Lys Arg Thr Leu Lys Ser
            35   40   45
Ser Leu Phe Asn Thr Trp
    50

<210> 5185

```
<211> 476
<212> PRT
<213> S.epidermidis

<400> 5185
Glu Ile Glu Gly Arg Phe Met Ile Lys Gln Ile Asn Ile Ser Asn Met
1               5                   10                  15
Asp Lys Leu Lys Glu Gln Met Glu Arg Ala Leu Ser Asp Gly Tyr Thr
            20                  25                  30
His Val Ile Pro Tyr Ser Asn Glu Ile Gln Ile His Gln Ser Met Ile
            35                  40                  45
Lys Ala Ile Thr Leu Pro Lys Thr Ser Phe Ile Val Asp Tyr Thr Ile
    50                  55                  60
Asn Asn Tyr Tyr Leu Asn Asp Cys Lys Tyr Phe Gly Leu Asp Phe Val
65                  70                  75                  80
Asp Phe Glu Asp Trp Val Lys Asn Ile Asn Leu Tyr Pro Asn Val Ile
                85                  90                  95
Tyr Glu Ile Asn Ser Thr Leu Glu Leu Ile Asp Lys Phe Glu Val Glu
                100                 105                 110
Asn Ile Phe Asp Leu Ala Leu Leu Thr Ile Leu Lys Gly His Ile Ala
                115                 120                 125
Val Glu Gly His Val Val Leu Asp Phe Lys Gly Pro Leu Lys Thr Ser
    130                 135                 140
Lys Gly Phe Trp Arg Ser Phe Asp Arg Asn Asp Leu Thr Tyr Arg Asp
145                 150                 155                 160
Lys Phe Phe Leu Asn Thr Ile Ala Tyr Ala His Lys Gln Arg Ile Pro
                165                 170                 175
Phe Thr Arg Val Pro Phe Asn Asp His Asp Ser Ile Arg Tyr Tyr Asp
            180                 185                 190
Ser Val Leu Leu Ser Thr Lys Phe Lys Ala Pro Arg Trp Leu Val Thr
            195                 200                 205
Pro Ile Lys Asn Tyr Ser Val Lys Lys His Lys Glu Ile Ser Tyr Ile
    210                 215                 220
Tyr Lys Lys Asp Ser Ser Lys Leu Lys Asn His Val Val Phe Leu Gly
225                 230                 235                 240
Phe Asp Phe Gly Tyr Arg Gly Asn Ser Lys Tyr Leu Phe Asn Tyr Phe
            245                 250                 255
Val Lys His Asn Pro Met Ile Glu Ser Tyr Phe Ile Thr Asp Glu Arg
            260                 265                 270
Thr Gly Pro His Phe Ile Ser Thr Asn Asp Glu Asn Val Lys Asn Leu
            275                 280                 285
Ile Glu Thr Ala Thr Phe Val Ile Thr Glu Ser Tyr Ile Pro Asp Asp
    290                 295                 300
Ile His Pro Asn Gly Lys Ile Ile Gln Leu Trp His Gly Thr Pro Ile
305                 310                 315                 320
Lys Lys Leu Phe Leu Asp Ser Lys Glu Pro His Gln Asn Leu Asn Ile
            325                 330                 335
Tyr Asn Tyr Arg Ala Arg Lys Tyr Asn Lys Trp Thr Gln Gln Asp Tyr
            340                 345                 350
Leu Ile Val Asp Ser Glu Glu Ser Lys Thr Tyr Phe Glu Ser Ala Phe
            355                 360                 365
Pro Ser Gln Lys Ile Asp Ile Leu Pro Val Gly Tyr Pro Arg Asn Asn
    370                 375                 380
Tyr Leu Leu Asn Arg Ile Asn Asp Val Gly Leu His Lys Arg Ile Phe
385                 390                 395                 400
Ser Glu Ile Asn Ile Asp Pro Thr Lys Arg Val Leu Leu Tyr Ala Pro
```

```
                    405                         410                         415
Thr Trp Lys Thr Asn Ser Ser Asp Asp Asp Ile Phe Pro Ile Asn Glu
            420                         425                         430
Gln Leu Leu Thr His Tyr Asn Val Ile Tyr Lys Gly His Val Glu Ser
            435                         440                         445
Lys Asn Asp Leu Val Pro Glu Gly Val Ile Asn Pro Pro Asn Asn Ile
        450                         455                         460
Glu Thr Gln Asp Leu Ile Ile Ile Ser Asp Val Val
465                         470                         475
```

<210> 5186
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5186
```
Tyr Leu Phe Met Glu Lys Thr Lys Ile Ile Thr Thr Asn Thr Leu Ser
1               5                       10                      15
Tyr Arg Leu Ala Leu Asn Leu Thr Lys Gly Ile Ile Ile Cys Leu Lys
            20                      25                      30
Leu Cys Gln Asn Phe Lys Ser Leu Leu
            35                      40
```

<210> 5187
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5187
```
His Tyr Val Ile Val Leu Asp Tyr Leu Tyr Leu Ser Val Ser Gly His
1               5                       10                      15
Leu Ser Cys His Ser Phe Cys Lys Ser Lys Phe Ile Glu Met Tyr Phe
            20                      25                      30
Ser Tyr Thr Lys Pro Glu Met Lys Leu
            35                      40
```

<210> 5188
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5188
```
Lys Phe Tyr Met Leu Ala Pro Thr Leu Ile Ile Ile Ser Met Ile His
1               5                       10                      15
Ile Thr Val Glu Leu His Met Gln Arg Cys Thr Ile Val Ser Thr Leu
            20                      25                      30
Thr Cys Leu Phe Ile Ser Thr Leu Ile Thr Val Ser Leu Ile Gln Ile
            35                      40                      45
Lys Arg Leu Lys Lys Asp Asn Asn Leu Asn Gln Ile
        50                      55                      60
```

<210> 5189
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5189
Cys Leu Ser Ile Val Tyr Met Asn Val Ser Val Tyr Lys Asn Asp Asn
1   5   10   15
Tyr Ile Phe Glu Ser Ser Tyr Ile Gln Phe Ile Tyr Val Asn Cys Arg
            20   25   30
Asn Leu Trp Asn Ile Thr Arg Lys Ser Val Thr Ile Cys Lys
        35   40   45

<210> 5190
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5190
Ile Pro Phe Ile Leu Asn Thr Val Arg His Ser Lys Asn Lys Met Ile
1   5   10   15
Gly Ile Ala Ala Ile Lys Asp Asp Asn Ser Lys Leu Pro Asn Gly Leu
            20   25   30
Lys Asp Ser Thr Asn Ile Leu Asn Ser Pro His
        35   40

<210> 5191
<211> 62
<212> PRT
<213> S.epidermidis

<400> 5191
Lys Pro Ser Ile Ile Pro Leu Met Ser Asn Ile Asn Gly Ala Ala Ser
1   5   10   15
Glu Ala Arg Val Lys Met Met Lys Val Asn Thr Ser Lys Met His Lys
            20   25   30
Lys Ala Gly Ile Ile Thr Ile Lys Lys Leu Ser Lys Leu Ser Pro Ile
        35   40   45
Thr Ala Thr Ile Ala Asp Glu Ile Phe Ile Asn Asp Thr Phe
    50   55   60

<210> 5192
<211> 114
<212> PRT
<213> S.epidermidis

<400> 5192
Lys Gly Asn Ile Thr Lys Ile Thr Trp Thr Ala Thr Asp Lys Gly Ile
1   5   10   15
Gly Pro His Glu Phe Ile Glu Phe Pro Ile Val Val Ala Asn Pro Lys
            20   25   30
Lys Glu Gly Thr Phe Lys Trp Asn Thr Thr Gln Thr Tyr Asp Asn Gly
        35   40   45
Asp Val Val Lys Trp Thr Gly Lys Glu Asp Ser Ala His Pro Ala Pro
    50   55   60
Thr Thr Thr Val Lys Lys Gly Ala Asn Pro Asn Asp Thr His Ser Asp
65   70   75   80
Ser Ser Gln Gly Asp Ser Ile Ala Leu Trp Ile Val Ala Ile Val Ala
            85   90   95
Ile Val Ile Ser Leu Ile Ala Leu Phe Lys Gln Ala His Pro Lys Lys
            100   105   110

Phe Asn

<210> 5193
<211> 352
<212> PRT
<213> S.epidermidis

<400> 5193
Gly Val Leu Met Ser Asp Ser Gln Arg Glu Gln Arg Lys Asn Glu His
1   5   10   15
Val Glu Ile Ala Met Ser Gln Lys Asp Ala Leu Val Ser Asp Phe Asp
                20   25   30
Lys Val Arg Phe Val His His Ser Ile Pro Ser Ile Asp Val Ser Gln
            35   40   45
Val Asp Met Thr Ser His Thr Thr Lys Phe Asp Leu Ala Tyr Pro Ile
        50   55   60
Tyr Ile Asn Ala Met Thr Gly Gly Ser Asp Trp Thr Lys Gln Ile Asn
65   70   75   80
Glu Lys Leu Ala Ile Val Ala Arg Glu Thr Gly Ile Ala Met Ala Val
                85   90   95
Gly Ser Thr His Ala Ala Leu Arg Asn Pro Asn Met Ile Glu Thr Phe
            100   105   110
Ser Ile Val Arg Lys Thr Asn Pro Lys Gly Thr Ile Phe Ser Asn Val
            115   120   125
Gly Ala Asp Val Pro Val Asp Lys Ala Leu Gln Ala Val Glu Leu Leu
        130   135   140
Asp Ala Gln Ala Leu Gln Ile His Val Asn Ser Pro Gln Glu Leu Val
145   150   155   160
Met Pro Glu Gly Asn Arg Glu Phe Ala Ser Trp Met Ser Asn Ile Glu
                165   170   175
Ser Ile Val Lys Arg Val Asp Val Pro Val Ile Ile Lys Glu Val Gly
            180   185   190
Phe Gly Met Ser Lys Glu Thr Leu Gln Ala Leu Tyr Asp Ile Gly Val
            195   200   205
Asn Tyr Val Asp Val Ser Gly Arg Gly Gly Thr Asn Phe Val Asp Ile
        210   215   220
Glu Asn Glu Arg Arg Ser Asn Lys Asp Met Asn Tyr Leu Ser Gln Trp
225   230   235   240
Gly Gln Ser Thr Val Glu Ser Leu Leu Glu Ser Thr Glu Phe Gln Asp
                245   250   255
Arg Leu Asn Ile Phe Ala Ser Gly Gly Leu Arg Thr Pro Leu Asp Ala
            260   265   270
Val Lys Cys Leu Ala Leu Gly Ala Lys Ala Ile Gly Met Ser Arg Pro
            275   280   285
Phe Leu Asn Gln Val Glu Gln Ser Gly Ile Thr Asn Thr Val Asp Tyr
            290   295   300
Val Glu Ser Phe Ile Gln His Met Lys Lys Ile Met Thr Met Leu Asp
305   310   315   320
Ala Pro Asn Ile Glu Arg Leu Arg Gln Ala Asp Ile Val Met Ser Pro
                325   330   335
Glu Leu Ile Ser Trp Ile Asn Gln Arg Gly Leu His Leu Asn Arg Lys
            340   345   350

<210> 5194
<211> 40

<212> PRT
<213> S.epidermidis

<400> 5194
Thr Asn Leu Ile Ile Tyr Ile Asn Cys Val Thr Gln Lys Asn Lys Ser
1   5   10   15
Gln His Tyr Glu Asn Ser Phe Ile Thr Gln Phe Lys Leu Gln Leu Phe
                20   25   30
Thr Cys Tyr Pro Leu Tyr Thr Asn
            35   40

<210> 5195
<211> 133
<212> PRT
<213> S.epidermidis

<400> 5195
Arg Arg Ile Ile Met Ser Ile Lys Glu Lys Leu Val Ile Glu Leu Met
1   5   10   15
Asn Leu Lys Asp Thr Val Lys Tyr Glu Leu Ser Glu Leu Asn Glu Gln
                20   25   30
Gln Tyr Leu Phe Met Asn Gly Pro Ala Pro Gln Leu Met Lys Arg Ala
            35   40   45
Met Lys Met Ser Tyr Ile Leu Gly Gln Lys Glu Ala Ile Asp His Phe
        50   55   60
Leu Leu Leu Ile Asp Thr Cys His Glu Asn Val Leu Leu Asp Asn Cys
65   70   75   80
Gln Asp Tyr Gln Lys Gln Ile Gln His Lys Gln Phe Ser Leu Gln Glu
                85   90   95
Asp Ile Ile His Gln Ile Asn Gln Ser Lys Glu Phe Glu Ser Phe Leu
            100   105   110
Ser Thr Tyr Tyr Val Asn Lys Gly Lys Tyr Asp Ile Thr Ser Lys Ile
        115   120   125
Lys Thr Leu Leu Glu
    130

<210> 5196
<211> 548
<212> PRT
<213> S.epidermidis

<400> 5196
Phe Ile Thr Ile Thr Leu Tyr Ile Gly Gly Ile His Met Ser Tyr Ser
1   5   10   15
Ile Gly Ile Asp Phe Gly Thr Ala Ser Gly Arg Val Ile Leu Ala Asp
                20   25   30
Thr Ser Asn Gly His Ile Ile Ser Arg Tyr Glu Glu Asp Tyr Ala Asn
            35   40   45
Gly Thr Tyr Met Asn Ser Leu Tyr Asp Lys Pro Leu Pro Glu Asn Tyr
        50   55   60
Phe Leu Gln Asn Ala Asp Asp Tyr Leu Gln Ile Leu Glu Gln Gly Val
65   70   75   80
Gln Phe Val Leu Glu Asp Ser Lys Val Asn Lys Asn Asp Val Val Gly
                85   90   95
Ile Gly Val Asp Phe Thr Ser Ser Thr Ile Ile Phe Leu Asp Glu Gln
            100   105   110

```
Phe Glu Pro Leu His Arg His Glu Asp Leu Lys Thr Asn Pro His Ala
    115                 120                 125
Tyr Val Lys Leu Trp Lys His His Gly Ala Gln Asp Glu Ala Asn Tyr
    130                 135                 140
Met Ile Gln Met Ser Lys Asn Lys Asn Trp Leu Asp Tyr Tyr Gly Ser
145                 150                 155                 160
Ser Val Asn Ser Glu Trp Met Ile Pro Lys Ile Leu Glu Val Lys His
                165                 170                 175
Glu Ala Pro Glu Ile Leu Arg Arg Ala Arg Tyr Ile Met Glu Ala Gly
                180                 185                 190
Asp Tyr Ile Thr Ser Ile Leu Thr Asn Ser Asn Ile Arg Ser Asn Cys
                195                 200                 205
Gly Ile Gly Phe Lys Gly Phe Trp Asp Asn Glu Ala Gly Phe Asn Tyr
    210                 215                 220
Asp Phe Phe His Ser Val Asp Pro Asp Leu Pro Lys Ile Val Lys Glu
225                 230                 235                 240
Lys Cys Glu Ala Pro Ile Ile Ser Ile Gly Glu Ser Ala Gly Arg Leu
                245                 250                 255
Cys Lys Asp Tyr Gln Gln Ile Trp Gly Leu Ser Gln Asp Val Gln Val
                260                 265                 270
Ser Pro Phe Ile Ile Asp Ala His Ser Gly Val Leu Gly Val Gly Ala
                275                 280                 285
Ile Glu Ala Gly Glu Phe Thr Ala Val Ile Gly Thr Ser Thr Cys His
    290                 295                 300
Leu Met Leu Asp Ser Arg Gln Val Pro Ile Ser Ser Ile Thr Gly Ser
305                 310                 315                 320
Val Lys Asn Ala Ile Ile Pro Gly Leu Tyr Ala Tyr Glu Ala Gly Gln
                325                 330                 335
Pro Ala Val Gly Asp Leu Phe Glu Tyr Ser Lys Asn Gln Ala Pro Lys
                340                 345                 350
His Ile Val Asp Gln Ala Asn Glu His His Met Pro Val Leu Asn Tyr
    355                 360                 365
Leu Glu Glu Leu Ala Ser His Ile Arg Ile Glu Glu Gln His Val Val
    370                 375                 380
Val Leu Asp Trp Leu Asn Gly Asn Arg Ser Ile Leu Ser Asn Ser His
385                 390                 395                 400
Leu Thr Gly Ser Ile Phe Gly Leu Thr Leu Gln Thr Pro Tyr Glu Met
                405                 410                 415
Ile His Arg Ala Tyr Ile Glu Ala Thr Ala Phe Gly Thr Lys Leu Ile
                420                 425                 430
Met Lys Gln Phe Glu Asp Asn His Ile Pro Val His Thr Val Tyr Ala
                435                 440                 445
Ser Gly Gly Ile Pro Gln Lys Ser Lys Leu Leu Val Glu Ile Tyr Ala
                450                 455                 460
Asn Val Leu Asn Lys Arg Val Val Val Ile Asp Ser Ser Asn Ala Ser
465                 470                 475                 480
Ala Leu Gly Ala Ala Met Leu Gly Ala Asn Val Gly Asn Ala Tyr Ser
                485                 490                 495
Thr Leu Lys Glu Ala Ala Leu Ser Met Lys Gln Pro Ile Ala Tyr Ile
                500                 505                 510
Gln Glu Pro Glu Ile Gln Lys Val Gln Ala Tyr Lys Pro Leu Tyr His
    515                 520                 525
Lys Tyr Cys Glu Leu His Asp Leu Leu Gly Arg Gln Tyr Pro Glu Leu
    530                 535                 540
Ser Tyr Leu Ile
545
```

<210> 5197
<211> 154
<212> PRT
<213> S.epidermidis

<400> 5197
Glu Ile Lys Met Val Arg Arg Ile Glu Asp His Ile Ser Phe Leu Glu
1   5   10   15
Lys Phe Ile Asn Asp Val Asn Thr Leu Thr Ala Lys Leu Leu Lys Asp
            20   25   30
Leu Gln Thr Glu Tyr Gly Ile Ser Ala Glu Gln Ser His Val Leu Asn
        35   40   45
Met Leu Ser Ile Glu Ala Leu Thr Val Gly Gln Ile Thr Glu Lys Gln
        50   55   60
Gly Val Asn Lys Ala Ala Val Ser Arg Arg Val Lys Lys Leu Leu Asn
65   70   75   80
Ala Glu Leu Val Lys Leu Glu Lys Pro Asp Ser Asn Thr Asp Gln Arg
                85   90   95
Leu Lys Ile Ile Lys Leu Ser Asn Lys Gly Lys Lys Tyr Ile Lys Glu
            100   105   110
Arg Lys Ala Ile Met Ser His Ile Ala Ser Asp Met Thr Ser Asp Phe
        115   120   125
Asp Ser Lys Glu Ile Glu Lys Val Arg Gln Val Leu Glu Ile Ile Asp
        130   135   140
Tyr Arg Ile Gln Ser Tyr Thr Ser Lys Leu
145   150

<210> 5198
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5198
Val Cys Met Met Phe Ser Thr Phe Val Val Leu Ser Leu Arg Lys Ile
1   5   10   15
Tyr Thr Asn Gln His Ala Ile Val Lys Leu Ile Tyr Leu Ser Pro Thr
            20   25   30
Ser His Thr Ile Tyr Leu Thr Gly Asn Ile Thr Cys Ile Ile Arg Gly
        35   40   45

<210> 5199
<211> 231
<212> PRT
<213> S.epidermidis

<400> 5199
Lys Val Val Ile Tyr Met Ile Lys Val Asn Ala Ile Ser Ile Gly Lys
1   5   10   15
Ile Glu Thr Leu Ser Tyr Gly Asn Tyr Lys Pro Met Gln Ser Ala Leu
            20   25   30
Asn Lys Ile Pro Phe Lys Gly Gln Met Trp Leu Asn Arg Leu Gly Phe
        35   40   45
Val Asp Asp Glu Gln Ala Tyr His Asn His Gly Gly Ile His Lys Ala
        50   55   60
Ile Cys Cys Phe Ser Lys Ser Asn Tyr Gln Leu Phe Lys Asp Asp Leu

```
        65                      70                      75                      80
Asp Gln Leu Pro Glu Phe Ala Met Phe Gly Glu Asn Leu Thr Val Glu
                85                      90                      95
His Leu Asp Glu Ala Asp Val Tyr Phe Gly Asn Gln Tyr Gln Leu Gly
                100                     105                     110
Asp Thr Ile Ile Glu Val Ser Asp Ile Arg Glu Pro Cys Trp Lys Ile
                115                     120                     125
Gln Ala Lys Tyr Ala Ile Pro Asn Leu Val Gln Lys Met Ser Gln Ser
        130                     135                     140
Gly Lys Thr Gly Phe Tyr Phe Arg Val Ile Lys Glu Gly Tyr Val His
145                     150                     155                     160
Gln Ser Asp Asn Leu Lys Leu Ile Lys Lys Ala Glu Ser Asn Thr Arg
                165                     170                     175
Leu Ser Val Lys Asp Leu Asn His Leu Phe Tyr Asn Glu Arg Asn Asn
                180                     185                     190
Leu Arg Leu Ile Tyr His Ala Leu Arg Asn Pro Tyr Leu Ser Pro Asp
                195                     200                     205
Arg Lys Lys Lys Leu Gln Lys Met Lys Thr Arg Ala Glu Asn Arg Lys
        210                     215                     220
Phe Ile Lys Ser Asp Asp Lys
225                     230
```

<210> 5200
<211> 471
<212> PRT
<213> S.epidermidis

<400> 5200
```
Cys Ser Glu Met Ser Arg Gly Asp Lys Met Ser Gln Cys Pro Asn Cys
1                   5                       10                      15
Gly His Gln Val Lys Asp Asp Thr Ser Gln Cys Pro Asn Cys Gly Gln
                20                      25                      30
Leu Leu Thr Lys Lys Lys Lys Arg Lys Ile Lys Asp Gln Ser Ser Gln
                35                      40                      45
Ser Ser Asn Glu Asn Ser Thr Asn Ile Arg Leu Arg Lys Ile Val Pro
        50                      55                      60
Ile Gly Ile Ser Val Phe Ile Leu Ile Leu Ile Ile Val Leu Phe Phe
65                      70                      75                      80
Leu Leu Arg Asn Tyr Asn Ser Pro Asn Ala Gln Ala Lys Ile Leu Val
                85                      90                      95
Asn Ala Val Asp Asn Asn Asp Ser Gln Lys Val Ala Thr Leu Leu Ser
                100                     105                     110
Thr Lys Asn Lys Lys Val Asp Asp Val Glu Ala Gln Gln Tyr Ile Asn
                115                     120                     125
Tyr Val Lys Lys Glu Val Gly Ile Lys Lys Tyr Ile Gln Asp Ile Asn
        130                     135                     140
Asn Thr Val Asp Lys Leu Asn Lys Ser Asn Ser Ser Val Ala Ser Tyr
145                     150                     155                     160
Ile Gln Thr Lys Ser Gly Gln Asp Val Leu Lys Ile Ser Lys Asn Gly
                165                     170                     175
Thr Lys Tyr Leu Ile Phe Asp Asn Met Ser Phe Thr Ala Pro Thr Lys
                180                     185                     190
Lys Pro Ile Ile Lys Pro Lys Val Glu Thr Lys Tyr Glu Phe Arg Thr
                195                     200                     205
Ser Gly Lys Lys Lys Thr Val Ile Ala Glu Ala Asn Lys Asn Thr Pro
        210                     215                     220
```

```
Leu Gly Glu Phe Ile Pro Gly Thr Tyr His Leu Pro Ala Lys Lys Ile
225                 230                 235                     240
Thr Glu Asn Gly Thr Phe Asn Gly His Leu Asn Phe Asp Phe Arg Glu
                245                 250                 255
Ser His Ser Glu Thr Val Asp Val Ala Glu Asp Tyr Asp Gln Ser Phe
                260                 265                 270
Ile Asn Ile Lys Phe Lys Gly Ala Asn Lys Leu Ser Asp Lys Ser Glu
                275                 280                 285
Lys Val Gln Ile Asn Asp Arg Thr Phe Thr Tyr Ser His Ser Lys Glu
                290                 295                 300
Phe Gly Pro Tyr Pro Lys Thr Lys Asp Ile Thr Ile Ser Ala Thr Gly
305                 310                 315                     320
Lys Ala Lys Gly Lys Thr Phe Ser Ser Glu Thr Lys Thr Ile Ser Ala
                325                 330                 335
Asp Asp Leu Lys Asp Asn Thr Lys Val Thr Leu Glu Phe Asp Ser Asp
                340                 345                 350
Lys Ile Asn Ser Tyr Val Glu Lys Lys Glu Lys Glu Glu Asn Ser Leu
                355                 360                 365
Lys Asn Lys Leu Thr Glu Phe Phe Thr Gly Tyr Ala Thr Ala Met Asn
                370                 375                 380
Ser Ala Phe Asn Met Asn Asp Phe Asn Phe Ile Ser Ser Tyr Phe Lys
385                 390                 395                     400
Lys Asn Ser Ser Ile Tyr Thr Ser Met Lys Ser Asn Phe Gln Asn Arg
                405                 410                 415
Thr Asn Val Thr Met Ile Ser Pro Gln Val Leu Ser Val His Arg Asn
                420                 425                 430
Gly His Thr Val Arg Thr Thr Ile Gln His Ile Asp His Ile Gly Asn
                435                 440                 445
Tyr Ile Asn Lys Asp Tyr Glu Leu Glu Ile Asp Asn Asp Asp Ser Asn
                450                 455                 460
Met Gln Leu Val Lys Glu Leu
465                 470

<210> 5201
<211> 57
<212> PRT
<213> S.epidermidis

<400> 5201
Thr Leu Phe Leu Lys Pro Thr Pro Leu Leu Ser Tyr Lys Asn Phe Ala
1               5                   10                  15
Pro Phe Phe Ile Leu Asp Ile Ile Thr His Leu Asn Asn Asn Tyr Ser
                20                  25                  30
Asn Phe Phe Glu Leu Asp Thr Asn Ile Lys Ile Glu Ile Leu Ser Ser
                35                  40                  45
Lys Leu Asn Thr Ser Ile Tyr Lys Ser
    50                  55

<210> 5202
<211> 408
<212> PRT
<213> S.epidermidis

<400> 5202
Lys Gly Gly Val Ser Leu Lys Arg Val Tyr Gln Ser Glu Asn Gln Ser
1               5                   10                  15
```

Leu Leu Phe Ile Val Ile Leu Gly Ser Leu Thr Ala Phe Gly Pro Leu
20 25 30
Ala Ile Asp Met Phe Leu Pro Gly Leu Pro Asn Ile Ser His Asp Phe
35 40 45
Asp Ile Ser Ala Ser Thr Thr Gln Leu Thr Ile Ser Phe Phe Met Ile
50 55 60
Gly Leu Ala Leu Gly Asn Phe Leu Ala Gly Pro Ile Ser Asp Ile Thr
65 70 75 80
Gly Arg Lys Lys Pro Leu Ile Phe Ser Leu Ile Ile Phe Thr Ile Ala
85 90 95
Ser Leu Gly Ile Ile Phe Val Thr Asn Ile Trp Ile Met Ile Ile Leu
100 105 110
Arg Phe Ile Gln Gly Leu Thr Gly Gly Ala Gly Ala Val Ile Ser Arg
115 120 125
Ala Ile Ala Ser Asp Met Tyr Ser Gly Asn Ala Leu Thr Lys Phe Leu
130 135 140
Ser Leu Leu Met Leu Val Asn Gly Ile Ala Pro Ile Ile Ala Pro Ala
145 150 155 160
Leu Gly Gly Ile Ile Leu Asn Tyr Gly Pro Trp Arg Ile Val Phe Val
165 170 175
Ile Leu Thr Met Phe Gly Ile Val Met Leu Ile Gly Thr Leu Phe Lys
180 185 190
Val Pro Glu Ser Leu Glu Lys Ser Leu Arg Glu Ser Ser Asn Ile Gly
195 200 205
Thr Met Leu Ile Asn Phe Lys Glu Leu Phe Lys Thr Pro Arg Phe Val
210 215 220
Leu Pro Met Leu Ile Gln Gly Val Ser Phe Val Leu Leu Phe Thr Tyr
225 230 235 240
Ile Ser Ala Ser Pro Phe Ile Val Gln Thr Ile Tyr Gly Leu Thr Pro
245 250 255
Leu Asn Phe Ser Ile Met Phe Ala Phe Ile Gly Val Thr Leu Ile Ile
260 265 270
Ser Ser Gln Leu Thr Gly Lys Leu Val Asp Tyr Ile Asp Arg Leu Leu
275 280 285
Leu Leu Arg Ile Met Ser Thr Ile Gln Val Ile Gly Val Ile Ile Val
290 295 300
Ser Leu Thr Leu Leu Asn His Trp Thr Phe Trp Ile Leu Ser Cys Gly
305 310 315 320
Phe Val Ile Leu Val Ala Pro Val Thr Gly Ile Ala Thr Leu Gly Phe
325 330 335
Ser Ile Ala Met Asp Glu Ser Lys Gly Ala Lys Gly Ser Ser Ser Ser
340 345 350
Leu Leu Gly Leu Phe Gln Thr Leu Leu Gly Gly Val Ile Ser Pro Leu
355 360 365
Val Gly Ile Lys Gly Asp Ser Asn Ala Ile Pro Tyr Ile Ile Val Ile
370 375 380
Val Ile Thr Ala Ile Ile Leu Met Val Leu Gln Leu Ile Asn Val Lys
385 390 395 400
Ile Phe Lys Lys Ala Lys Ile His
405

<210> 5203
<211> 208
<212> PRT
<213> S.epidermidis

```
<400> 5203
Lys Arg Glu Val Ile Tyr Leu Asp Phe Ile Asn Gln Gln Thr Thr Gln
1               5                   10                  15
Thr Ala Lys Ala Leu Leu Gly Val Lys Ile Ile Tyr Gln Asp Asp Tyr
            20                  25                  30
Gln Thr Tyr Thr Gly Tyr Ile Val Glu Thr Glu Ala Tyr Leu Gly Ile
        35                  40                  45
Gln Asp Lys Ala Ala His Gly Phe Gly Gly Lys Ile Thr Pro Lys Val
    50                  55                  60
Thr Ser Leu Tyr Lys Lys Gly Gly Thr Ile Tyr Ala His Val Met His
65                  70                  75                  80
Thr His Leu Leu Ile Asn Phe Val Thr Arg Thr Glu Gly Ile Pro Glu
                85                  90                  95
Gly Val Leu Ile Arg Ala Ile Glu Pro Asp Glu Gly Ile Gly Ala Met
            100                 105                 110
Asn Val Asn Arg Gly Lys Ser Gly Tyr Glu Leu Thr Asn Gly Pro Gly
            115                 120                 125
Lys Trp Thr Lys Ala Phe Asn Ile Pro Arg Ser Ile Asp Gly Ser Thr
            130                 135                 140
Leu Asn Asp Cys Lys Leu Ser Ile Asp Thr Asn His Arg Lys Tyr Pro
145                 150                 155                 160
Lys Thr Ile Ile Glu Ser Gly Arg Ile Gly Ile Pro Asn Lys Gly Glu
                165                 170                 175
Trp Thr Asn Lys Pro Leu Arg Phe Thr Val Lys Gly Asn Pro Tyr Val
            180                 185                 190
Ser Arg Met Arg Lys Ser Asp Phe Gln Asn Pro Asp Asp Thr Trp Lys
            195                 200                 205

<210> 5204
<211> 54
<212> PRT
<213> S.epidermidis

<400> 5204
Asn Leu Leu Phe Asn Tyr Cys Cys Pro Phe Ala Asp Ile Ile Ile Asn
1               5                   10                  15
Lys Lys Leu Lys Lys Ile Val Tyr Ser Ile Glu Ser Leu Leu Ala Tyr
            20                  25                  30
Lys Ile Arg Lys Pro Arg Thr Leu Ile Phe Val Leu Gly Ala Tyr Tyr
        35                  40                  45
His Lys Gln Ile Leu Tyr
        50

<210> 5205
<211> 320
<212> PRT
<213> S.epidermidis

<400> 5205
Lys Glu Leu Leu Ile Met Ile Thr Ala Tyr Lys His Ala Leu His His
1               5                   10                  15
Pro Ser Gln Ile Ile Glu Thr Glu Ile Asn His Ser Ala Ser Trp Ile
            20                  25                  30
Asn Val Val Glu Pro Asp Arg Glu Glu Ile Glu Gly Leu Met Glu Phe
            35                  40                  45
Tyr Asn Ile Pro Glu Asp Phe Ile Arg Asp Pro Leu Asp Ser Glu Glu
```

```
        50                      55                      60
Ser Ala Arg Ile Glu Tyr Asp Glu Asp Thr Gly Tyr Ser Leu Ile Ile
65                      70                      75                      80
Ile Asp Leu Pro Ile Val Asn Ser Thr Asn Arg Arg Val Leu Ser Phe
                 85                      90                      95
Val Thr Ile Pro Leu Gly Ile Ile Ile Gly Asn Gly Ile Val Met Thr
                100                     105                     110
Val Cys Asp Ala Glu Asn Glu Phe Leu Glu Asn Phe Ala Lys Gln Glu
            115                     120                     125
Asp Ile Asn Leu Lys Phe His Ser Arg Phe Ala Leu Glu Ile Leu Thr
        130                     135                     140
Thr Ile Ala Asn His Tyr Asn Arg Asn Leu Arg Leu Leu Asn Lys Ser
145                     150                     155                     160
Arg Ile Arg Ile Glu Arg Glu Leu Lys Asn Asn Ile Thr Asn Lys Gln
                165                     170                     175
Leu Phe Lys Leu Met Glu Val Glu Lys Ser Leu Val Tyr Phe Leu Ala
                180                     185                     190
Ala Leu Lys Gly Asn Asp Thr Ile Ile Lys Lys Leu Phe Arg Leu Pro
            195                     200                     205
Ala Ile Lys Arg Phe Glu Glu Asp Glu Glu Leu Leu Glu Asp Leu Val
            210                     215                     220
Ile Glu Asn Asn Gln Ala Ile Glu Thr Thr Glu Leu His Gln Arg Ile
225                     230                     235                     240
Leu Glu Ser Ile Thr Ser Ser Tyr Ala Ser Leu Leu Ser Asn Asp Met
                245                     250                     255
Asn Asn Ile Met Lys Thr Leu Thr Leu Phe Thr Val Leu Leu Thr Leu
                260                     265                     270
Pro Thr Leu Val Phe Ser Phe Phe Gly Met Asn Val Pro Leu Pro Ile
            275                     280                     285
Asp Asp His Ser Tyr Val Ser Trp Ile Ile Val Val Gly Ile Ser Leu
            290                     295                     300
Ile Leu Val Ala Ile Val Ser Ile Phe Leu Trp Lys Lys Gln Lys Leu
305                     310                     315                     320
```

<210> 5206
<211> 219
<212> PRT
<213> S.epidermidis

<400> 5206
```
Glu Gly Ile Phe Met Lys Lys Met Ile Leu Ile Asn Val Ile Thr Ile
1                5                      10                      15
Ile Val Leu Val Val Ile Gly Val Leu Gly Phe Trp Phe Trp His Asn
            20                      25                      30
Thr Thr Ser Tyr Val Thr Thr Asp Asn Ala Lys Val Asp Gly Asp Gln
            35                      40                      45
Ile Lys Ile Ser Ser Pro Ala Ser Gly Gln Ile Lys Ser Leu Asn Val
        50                      55                      60
Lys Gln Gly Asp Lys Leu Asp Lys Gly Asp Lys Val Ala Glu Val Leu
65                      70                      75                      80
Ala Gln Gly Gln Asp Gly Gln Ser Lys Asp Met Asn Ile Lys Met Pro
                85                      90                      95
Gln Lys Gly Thr Ile Val Lys Thr Asp Gly Ile Glu Gly Ser Met Thr
                100                     105                     110
Gln Ala Gly Asn Pro Ile Ala Tyr Ala Tyr Asn Leu Asp Asp Leu Tyr
            115                     120                     125
```

```
Ile Thr Ala Asn Val Asp Glu Lys Asp Ile Ser Asp Val Glu Lys Gly
    130                 135                 140
Asn Asp Val Asp Val Asp Ile Asp Gly Gln Lys Ala Ser Ile Lys Gly
145                 150                 155                 160
Lys Val Glu Glu Val Gly Gln Ala Thr Ala Ala Ser Phe Ser Leu Met
                165                 170                 175
Pro Ser Ser Asn Ser Asp Gly Asn Tyr Thr Lys Val Ser Gln Val Val
                180                 185                 190
Pro Val Lys Ile Ser Leu Asp Ser Asn Pro Ser Lys Asn Val Val Pro
            195                 200                 205
Gly Met Asn Ala Glu Val Lys Ile His Lys Asn
    210                 215
```

<210> 5207
<211> 410
<212> PRT
<213> S.epidermidis

<400> 5207
```
Val Leu Val Leu Phe Ser Gly Asp Phe Thr Thr Met Pro Leu Asn Val
1                   5                   10                  15
Ala Ile Thr Ile Thr Val Ile Val Ala Leu Leu Met Asn Arg Lys Glu
            20                  25                  30
Thr Phe Ala Lys Lys Val Glu Val Phe Thr Lys Gly Ala Gly His Ser
            35                  40                  45
Asn Ile Ile Leu Met Met Leu Ile Phe Ile Leu Ala Gly Ala Phe Ser
        50                  55                  60
Thr Thr Ala Glu Lys Met Gly Gly Val Ser Ser Thr Val Asn Leu Gly
65                  70                  75                  80
Leu Ser Leu Ile Pro Gln Asn Leu Ile Ile Val Gly Leu Phe Ile Ile
                85                  90                  95
Cys Met Phe Val Ser Ile Ser Met Gly Thr Ser Val Gly Thr Val Ala
            100                 105                 110
Ala Ile Ala Pro Val Gly Phe Gly Phe Ala Gln Ala Thr Asp Val Pro
        115                 120                 125
Ala Ala Leu Ala Met Ala Thr Val Val Gly Gly Ala Met Phe Gly Asp
    130                 135                 140
Asn Leu Ser Met Ile Ser Asp Thr Thr Ile Ala Ala Val Arg Thr Gln
145                 150                 155                 160
Lys Thr Lys Met Ser Asp Lys Phe Lys Val Asn Phe Lys Ile Val Leu
                165                 170                 175
Pro Gly Ala Ile Ile Thr Ile Ile Ile Leu Phe Phe Leu Thr Asn Gly
            180                 185                 190
Ile Ser Ile Asp His Thr Lys Asn Tyr Asp Tyr Asn Leu Ile Lys Val
        195                 200                 205
Ile Pro Tyr Leu Leu Val Leu Ile Leu Ala Leu Val Gly Ile Asn Val
    210                 215                 220
Ile Ile Val Leu Ile Gly Gly Thr Val Leu Ala Gly Ile Ile Gly Leu
225                 230                 235                 240
Ile Asp Gly Ser Phe Gly Trp Asn Gly Leu Leu Asn Ala Ile Ser Lys
                245                 250                 255
Gly Ile Ile Gly Met Glu Asp Ile Ala Met Ile Ala Leu Leu Ile Gly
            260                 265                 270
Gly Leu Val Gly Ile Ile Gln His Asn Gly Gly Ile Asp Trp Leu Leu
    275                 280                 285
Asn Phe Val Arg Ser Lys Val Lys Ser Lys Arg Gly Ala Glu Leu Gly
```

```
            290                          295                          300
Ile Ala Ser Leu Val Ser Ala Ala Asp Ile Ser Thr Ala Asn Asn Thr
305                          310                          315                          320
Ile Ser Ile Ile Met Ala Gly Pro Leu Ala Lys Asn Ile Ala Asp Glu
                325                          330                          335
Tyr Asp Val Asp Pro Arg Lys Ser Ala Ser Ile Leu Asp Ile Phe Gly
                340                          345                          350
Gly Cys Phe Gln Gly Leu Leu Pro Tyr Ser Pro Gln Val Ile Ser Ala
                355                          360                          365
Ala Gly Val Ala Gly Ile Ser Pro Phe Leu Met Leu Gln Tyr Ser Ile
                370                          375                          380
Tyr Pro Ile Leu Leu Gly Val Cys Gly Leu Val Ala Ile Ile Leu Arg
385                          390                          395                          400
Val Pro Arg Leu Asn Gln Ser Ser Lys Lys
                405                          410
```

<210> 5208
<211> 142
<212> PRT
<213> S.epidermidis

<400> 5208
```
Gly Gly Phe Phe Met Arg Arg Leu Leu Tyr Ser Phe Leu Phe Tyr Met
1                    ·    5                          10                          15
Val Ile Gly Leu Leu Ser Gly Phe Tyr Tyr Arg Glu Leu Thr Lys Ala
                20                          25                          30
His Asp Phe Val Gly Asp Thr Gln Leu Ser Leu Val His Thr His Thr
                35                          40                          45
Leu Ile Leu Gly Met Phe Met Phe Leu Leu Leu Pro Leu Glu Lys
                50                          55                          60
Val Phe Lys Leu Ser Ser Tyr Tyr Leu Phe Asn Trp Phe Phe Phe Val
65                          70                          75                          80
Tyr His Leu Gly Val Leu Ile Thr Ile Ser Met Met Thr Val Lys Gly
                85                          90                          95
Thr Phe Gln Val Ile Gly Lys Lys Phe Ser Pro Glu Met Phe Ala Gly
                100                         105                         110
Phe Ala Gly Ile Gly His Thr Gly Met Leu Ala Gly Leu Leu Leu Leu
                115                         120                         125
Phe Phe Leu Leu Arg Gln Ala Ile Leu Thr Glu Pro Lys Lys
                130                         135                         140
```

<210> 5209
<211> 94
<212> PRT
<213> S.epidermidis

<400> 5209
```
Cys Lys Thr Leu Thr Asn Phe Leu Ser Lys Ser Leu Leu Ser Val Leu
1                    5                          10                          15
Val Ile Ile Phe Glu Lys Ile Ala Arg Ser Leu Ala Gly Val Lys Gly
                20                          25                          30
Gly Phe Ile Leu Lys Val Val Leu Tyr Phe Ile Tyr Phe Phe Val Ala
                35                          40                          45
Phe Phe Val Val Asp Ser Leu Ile Ser Leu Val Phe Pro Ile Glu Phe
                50                          55                          60
Asp Val Tyr Thr Asn Leu Ile Thr Ala Phe Ile Phe Ala Val Phe Met
```

```
65                          70                          75                          80
Thr Pro Leu Leu Phe Val Leu Lys Gln Asp Lys Asn Lys Lys
                85                          90
```

<210> 5210
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5210
```
Leu Phe Lys Phe Lys Ile Glu Cys Ile Val Leu Ser Leu Ser Ile Phe
1               5                           10                          15
Tyr Cys Tyr Ser Lys Leu Phe Asp Thr Gln Leu Lys Asn Lys Ile Gln
            20                          25                          30
Met Val Cys Ile Lys Glu Ser Leu
        35                          40
```

<210> 5211
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5211
```
His Ile Lys Phe Leu Ala Tyr Thr Ile Ser Ile Met Phe Phe Asp Met
1               5                           10                          15
Lys Gln Gln Ile Asp Ile Ala Lys Leu Ile Leu Ser Leu Asn Ser Leu
            20                          25                          30
Val Phe Ile Asp Leu Met Thr Phe Asn Lys Phe Arg Phe Ala Ile Asn
        35                          40                          45
Met Tyr Phe Ser Ile Ile Ile
    50                          55
```

<210> 5212
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5212
```
His Ala Ile Ser His Ser Val Ile Asn Cys Gln His Val Lys Met Pro
1               5                           10                          15
Glu Thr Ser Thr Asn Ile Thr Gly Ile Leu Lys Leu Asn Ile Ser Lys
            20                          25                          30
Ile Ile Lys Phe Leu His Asp Asp Phe
        35                          40
```

<210> 5213
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5213
```
Val Ile Glu Leu Cys Leu Thr Leu Gln Asp Ile Cys Asn Asn Val Asn
1               5                           10                          15
Thr Tyr Tyr Phe Lys Tyr Phe Asn Asn Ser Leu His Ile Phe Asn Asn
            20                          25                          30
Ser Lys Val Phe Phe Glu Asn Ser His Thr Tyr
```

35   40

```
<210> 5214
<211> 402
<212> PRT
<213> S.epidermidis

<400> 5214
Met Ile Glu Phe Asp Ala Ile Thr Thr Leu Cys Leu Ala Cys Val Leu
1               5                   10                  15
Tyr Leu Ile Gly Gln Thr Ile Ile Asn His Val Ser Ile Leu Arg Arg
            20                  25                  30
Ile Cys Ile Pro Ala Pro Val Ile Gly Gly Leu Leu Phe Ala Ile Leu
        35                  40                  45
Val Ala Ile Leu Asp Ser Phe Asn Ile Val Lys Ile Lys Leu Asp Ser
    50                  55                  60
Ala Phe Ile Gln Asn Phe Phe Met Leu Ala Phe Phe Thr Thr Ile Gly
65                  70                  75                  80
Leu Gly Ala Ser Leu Lys Leu Phe Lys Ile Gly Gly Lys Val Met Leu
            85                  90                  95
Ile Tyr Phe Thr Phe Cys Gly Ile Met Ala Ile Cys Gln Asn Ile Ile
            100                 105                 110
Gly Val Ser Leu Ala Lys Leu Leu Asn Ile Lys Pro Leu Leu Gly Leu
        115                 120                 125
Thr Ala Gly Ser Met Ser Met Glu Gly Gly His Gly Asn Ala Ala Ala
    130                 135                 140
Tyr Gly Lys Thr Leu Gln Asp Met Gly Val Asp Ser Ala Val Ala Ala
145                 150                 155                 160
Ala Leu Ala Ala Ala Thr Leu Gly Leu Val Phe Gly Gly Leu Ile Gly
            165                 170                 175
Gly Pro Ile Val Lys Tyr Leu Ile Lys Arg Tyr Asp Leu Lys Pro Glu
        180                 185                 190
His Arg Asp Asp Ser Phe Lys Asn Tyr Gly Val Val Glu Tyr Asn Gln
        195                 200                 205
Ser Leu His Thr Lys Tyr Lys Pro Ile Gln Val Phe Phe Ile Gln Phe
    210                 215                 220
Ser Ile Leu Val Phe Cys Met Ala Leu Gly Thr Tyr Ile Gly Asn Thr
225                 230                 235                 240
Phe Thr Asp Leu Thr Gly Val Asn Ile Pro Met Tyr Val Gly Ser Met
            245                 250                 255
Phe Val Ala Val Ile Ile Arg Asn Ala Thr Asp Phe Ile Gly Trp Asp
            260                 265                 270
Ile Val Asp Leu Lys Met Ser Glu Gln Ile Gly Asp Ile Ser Leu Gly
        275                 280                 285
Ile Phe Leu Ser Leu Ala Leu Met Ser Ile Gln Leu Thr Gln Ile Tyr
    290                 295                 300
Ser Leu Ala Ile Pro Leu Ile Ile Ile Val Leu Val Gln Val Val Phe
305                 310                 315                 320
Met Val Leu Phe Ser Ile Phe Ile Leu Phe Lys Gly Leu Gly Lys Asp
            325                 330                 335
Tyr Asp Ala Ala Val Met Val Gly Gly Phe Ile Gly His Gly Leu Gly
            340                 345                 350
Ala Thr Pro Asn Ala Met Ala Asn Leu Asp Val Ile Thr Lys Lys Phe
    355                 360                 365
Gly Asn Ser Pro Lys Ala Tyr Leu Val Val Pro Ile Val Gly Ala Phe
    370                 375                 380
```

```
Leu Ile Asp Leu Ile Gly Val Ile Ile Val Met Ser Phe Ile Gln Leu
385             390             395                 400
Phe Ser
```


<210> 5215
<211> 62
<212> PRT
<213> S.epidermidis

<400> 5215
```
Thr Val His Ser Tyr Ile Tyr Leu Leu Ser Arg Ile Asn Ser Ile Lys
1               5                   10                  15
Leu Tyr Thr Val Val Ile Gln Ile Asn Tyr Ser Ile His Tyr Tyr Thr
            20              25                  30
Leu Gln Gly Thr Glu Phe Asn Leu Leu Ile His Thr Ser Leu Phe Lys
        35              40                  45
Leu His His Leu Leu Leu Thr Asn Tyr Lys Asn Gln Tyr Phe
    50                  55                  60
```

<210> 5216
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5216
```
Ala Pro Ile Ser Asn Asn Ile Asp Phe Lys Lys Leu Phe Ser Ser Asn
1               5                   10                  15
His Phe Lys Asn Lys Asn His Ile Phe Ala Leu Ser Gln Tyr Ile Leu
            20              25                  30
Asn Asn His Asp Tyr Phe Val Leu Gly Ile
        35              40
```

<210> 5217
<211> 47
<212> PRT
<213> S.epidermidis

<400> 5217
```
Ile Ile Leu Ser Leu Leu Ile Leu Ser Cys Val Asn Lys Lys Arg Gln
1               5                   10                  15
Lys Lys His Thr Leu Lys Lys Phe Leu Cys Leu Asn Leu Ile Asn Leu
            20              25                  30
Tyr Ser Phe Tyr Ile Asn Cys Ile Leu Pro His Thr Thr Lys Ile
        35              40                  45
```

<210> 5218
<211> 362
<212> PRT
<213> S.epidermidis

<400> 5218
```
Asp Ile Thr Ser Met Glu Gly Gly Tyr Lys Leu Asn Ile Thr Lys Ala
1               5                   10                  15
Ile Val Val Ala Ile Tyr Ile Ile Val Gly Ala Ala Leu Gly Val Ile
            20              25                  30
```

```
Ile Ile Pro Glu Val Val Thr Asp Leu Gly Ile His His His Ala Val
    35                  40                  45
Ile Thr Asn Tyr Tyr Val Asp Gly Phe Ile Gly Ile Ile Ile Phe Phe
    50                  55                  60
Ile Ile Phe Gly Leu Phe Ile Asn Lys Val Thr Tyr Thr Phe Lys Gln
65                  70                  75                  80
Phe Glu Gln Leu Ile Met Arg Arg Ser Ala Val Glu Ile Leu Phe Ala
                85                  90                  95
Thr Ile Gly Leu Ile Ile Gly Leu Phe Ile Ser Val Met Val Ser Phe
                100                 105                 110
Ile Leu Glu Met Ile Gly Asn Ser Ile Leu Asn His Phe Val Pro Met
    115                 120                 125
Ile Ile Thr Ile Ile Leu Cys Tyr Leu Gly Phe Gln Phe Gly Leu Lys
    130                 135                 140
Lys Arg Asp Glu Met Leu Met Phe Leu Pro Glu Asn Met Ala Arg Ser
145                 150                 155                 160
Met Ser Asn Asn Ile Arg Arg Ala Thr Pro Lys Ile Val Asp Thr Ser
                165                 170                 175
Ala Ile Ile Asp Gly Arg Ile Leu Asp Ile Ile Arg Cys Gly Phe Ile
                180                 185                 190
Asp Gly Asp Ile Leu Ile Pro Gln Gly Val Ile Asn Glu Leu Gln Val
    195                 200                 205
Ile Ala Asp Ala Lys Asp Ser Val Lys Arg Glu Lys Gly Gln Arg Gly
    210                 215                 220
Leu Asp Ile Leu Asn Gln Leu Tyr Asp Leu Asp Tyr Pro Thr Arg Val
225                 230                 235                 240
Ile His Pro Thr Gln Ser His Ser Asp Ile Asp Thr Leu Leu Ile Lys
                245                 250                 255
Leu Ala Gln Gln Tyr His Ala His Val Ile Thr Thr Asp Phe Asn Leu
                260                 265                 270
Asn Lys Val Cys His Val Gln Gly Ile Thr Ala Leu Asn Val Asn Asp
    275                 280                 285
Leu Ser Glu Ala Ile Lys Pro Asn Val His Gln Gly Asp Gln Leu Ser
    290                 295                 300
Ile Leu Leu Thr Lys Ile Gly Lys Glu Pro Gly Gln Gly Val Gly Tyr
305                 310                 315                 320
Leu Asp Asp Gly Thr Met Val Val Val Asp Asn Ala Lys Ser Tyr Ile
                325                 330                 335
Gly Gln Gln Val Asn Leu Glu Val Val Ser Leu Leu Gln Thr Ser Ser
                340                 345                 350
Gly Arg Ile Val Phe Ala Lys Phe Val Asp
    355                 360
```

<210> 5219
<211> 68
<212> PRT
<213> S.epidermidis

<400> 5219
```
Ile Gln Thr Ser Ser Trp Leu Asn Ile Arg Lys Val Ile Ala Gln Arg
1               5                   10                  15
Ala Glu Asn His Gln Lys Asn Tyr Lys Lys Asp Asn Ser Tyr Ile Ile
                20                  25                  30
Ser Ile Glu Ile Val Phe Ile Tyr Leu Phe Trp Asn Phe Leu Phe Gln
        35                  40                  45
Ala Phe His Ile Tyr Ile Asp Ile Asp Leu Ile Ile Ile Thr Met Phe
```

```
        50                     55                      60
Val Gly Ile Lys
65


<210> 5220
<211> 331
<212> PRT
<213> S.epidermidis


<400> 5220
Glu Val Lys Ser Leu Val Lys Ser Gly Lys Ala Arg Ala His Thr Asn
1               5                   10                  15
Ile Ala Leu Ile Lys Tyr Trp Gly Lys Ala Asp Glu Thr Tyr Ile Ile
            20                  25                  30
Pro Met Asn Asn Ser Leu Ser Val Thr Leu Asp Arg Phe Tyr Thr Glu
        35                  40                  45
Thr Lys Val Thr Phe Asp Pro Asp Phe Thr Glu Asp Cys Leu Ile Leu
        50     ·            55                  60
Asn Gly Asn Glu Val Asn Ala Lys Glu Lys Glu Lys Ile Gln Asn Tyr
65                  70                  75                  80
Met Asn Ile Val Arg Asp Leu Ala Gly Asn Arg Leu His Ala Arg Ile
                85                  90                  95
Glu Ser Glu Asn Tyr Val Pro Thr Ala Ala Gly Leu Ala Ser Ser Ala
            100                 105                 110
Ser Ala Tyr Ala Ala Leu Ala Ala Ala Cys Asn Glu Ala Leu Ser Leu
            115                 120                 125
Asn Leu Ser Asp Thr Asp Leu Ser Arg Leu Ala Arg Arg Gly Ser Gly
        130                 135                 140
Ser Ala Ser Arg Ser Ile Phe Gly Gly Phe Ala Glu Trp Glu Lys Gly
145                 150                 155                 160
His Asp Asp Leu Thr Ser Tyr Ala His Gly Ile Asn Ser Asn Gly Trp
                165                 170                 175
Glu Lys Asp Leu Ser Met Ile Phe Val Val Ile Asn Asn Gln Ser Lys
            180                 185                 190
Lys Val Ser Ser Arg Ser Gly Met Ser Leu Thr Arg Asp Thr Ser Arg
            195                 200                 205             ·
Phe Tyr Gln Tyr Trp Leu Asp His Val Asp Glu Asp Leu Asn Glu Ala ·
        210                 215                 220
Lys Glu Ala Val Lys Asn Gln Asp Phe Gln Arg Leu Gly Glu Val Ile
225                 230                 235                 240
Glu Ala Asn Gly Leu Arg Met His Ala Thr Asn Leu Gly Ala Gln Pro
                245                 250                 255
Pro Phe Thr Tyr Leu Val Gln Glu Ser Tyr Asp Ala Met Ala Ile Val
            260                 265                 270
Glu Gln Cys Arg Lys Ala Asn Leu Pro Cys Tyr Phe Thr Met Asp Ala
            275                 280                 285
Gly Pro Asn Val Lys Val Leu Val Glu Lys Lys Asn Lys Gln Ala Val
        290                 295                 300
Met Glu Gln Phe Leu Lys Val Phe Asp Glu Ser Lys Ile Ile Ala Ser
305                 310                 315                 320
Asp Ile Ile Ser Ser Gly Val Glu Ile Ile Lys
                325                 330


<210> 5221
<211> 90
<212> PRT
```

<213> S.epidermidis

<400> 5221
Thr His Lys Ser Leu Arg Arg Ile Gln Tyr Met Thr Lys Asn Thr Leu
1   5   10   15
Asn Asp Leu Asn Asn His Leu Phe Ala Gln Leu Glu Arg Leu Ser Asp
            20   25   30
Glu Glu Leu Lys Gly Glu Glu Leu Gln Glu Glu Leu Asn Arg Ser Lys
            35   40   45
Ala Val Ser Asp Val Ala Lys Asn Ile Val Ser Asn Gly Asn Leu Ile
            50   55   60
Leu Gln Ala His Lys Phe Lys Asp Glu Gln Met Asn Ala Asp Ala Lys
65   70   75   80
Leu Pro Lys Met Leu Glu Asn Lys Glu Lys
                85   90

<210> 5222
<211> 413
<212> PRT
<213> S.epidermidis

<400> 5222
Val Lys Phe Leu Ala Ser Gln Leu Phe Lys Gly Gly Phe Phe Ile Asp
1   5   10   15
Tyr Leu Gly Val Asp Ile Ser Lys Arg Ser Ser Val Val Ala His Tyr
            20   25   30
Lys Asn Glu Lys Phe Gln Lys Glu Phe Phe Ile Gln Asn Asn Lys Asn
            35   40   45
Gly Tyr Asn Tyr Leu Leu Lys Tyr Leu Asn Asp Leu Asp His Pro Gln
            50   55   60
Leu Ile Phe Glu Ser Thr Gly Ile Tyr Ser Arg Ser Met Glu Arg Phe
65   70   75   80
Cys Cys Val Asn Gln Ile Asn Tyr Ile Gln Met Asn Pro Leu Glu Ala
                85   90   95
Lys Phe Lys Thr Ser Ala Leu Arg Ser Trp Lys Thr Asp Gln Ala Asp
            100   105   110
Ala His Lys Leu Ala Cys Leu Gly Pro Thr Leu Lys Gln Thr Asp Asn
            115   120   125
Leu Pro Ile His Glu Leu Ile Phe Phe Glu Leu Arg Glu Arg Val Arg
            130   135   140
Phe His Leu Glu Ile Glu Asn Glu Gln Asn Arg Leu Lys Phe Gln Ile
145   150   155   160
Leu Glu Leu Leu His Gln Thr Phe Pro Gly Leu Glu Arg Leu Phe Ser
                165   170   175
Ser Arg Tyr Ser Ile Ile Ala Leu Asn Ile Ala Glu Ile Phe Thr His
            180   185   190
Pro Asp Met Val Leu Asp Ile Asp Lys Glu Val Leu Ile Thr His Ile
            195   200   205
Phe Asn Ser Thr Asp Lys Gly Met Ser Met Asp Lys Ala Thr Lys Tyr
            210   215   220
Ala Leu Gln Leu Arg Val Ile Ala Gln Glu Ser Tyr Pro Asn Val Asp
225   230   235   240
Arg His Ser Phe Leu Val Glu Lys Leu Arg Leu Leu Ile Gln Gln Leu
                245   250   255
Lys Gln Ser Ile His His Leu Lys Gln Leu Asp Asp Ala Met Ile Gln
            260   265   270

```
Leu Ala Gln Gln Leu Asp Tyr Phe Glu Asn Ile His Ser Ile Pro Gly
        275                 280                 285
Ile Gly Lys Leu Ser Thr Ala Met Ile Ile Gly Gly Ile Gly Asp Ile
        290                 295                 300
Lys Arg Phe Lys Ser Asn Lys Gln Leu Asn Ala Phe Val Gly Ile Asp
305                 310                 315                 320
Ile Lys Arg Tyr Gln Ser Gly His Thr His Cys Arg Asp Thr Ile Asn
                325                 330                 335
Lys Arg Gly Asn Lys Lys Ala Arg Lys Leu Leu Phe Trp Val Ile Met
                340                 345                 350
Asn Ile Ile Arg Gly Gln His His Tyr Asp Asn His Val Val Asp Tyr
                355                 360                 365
Tyr Tyr Lys Leu Arg Lys Gln Pro Asn Glu Lys Pro His Lys Thr Ala
    370                 375                 380
Ile Ile Ala Cys Ile Asn Arg Leu Leu Lys Thr Ile His Tyr Leu Val
385                 390                 395                 400
Met Asn His Lys Leu Tyr Asp Tyr Gln Met Ser Pro His
                405                 410
```

<210> 5223
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5223
```
Arg His Thr Phe Pro Pro Ile Leu Tyr Ile Pro Lys Asn Ile Tyr Phe
1               5               10                  15
Leu Phe Leu Ile Leu Leu Asp Glu Thr Met Leu Ile Ile His Met Phe
            20                  25                  30
Val Lys Met Ile Ser Ser Leu Lys Leu Asn Pro
        35                  40
```

<210> 5224
<211> 141
<212> PRT
<213> S.epidermidis

<400> 5224
```
Gly Gly Thr Leu Ser Lys Tyr Asn Ser Lys Lys Val Glu Tyr Lys Gly
1               5                   10                  15
Val Val Phe Asp Ser Lys Ile Glu Cys Asp Phe Tyr Gln His Leu Glu
            20                  25                  30
Arg Asn Leu Gly Asn Glu Tyr Asp His Ile Glu Leu Gln Pro Arg Tyr
        35                  40                  45
Glu Leu Ile Pro Lys Phe Asp Asn Gln Arg Lys Thr Glu Tyr Ile Ala
    50                  55                  60
Asp Phe Ala Leu Trp Lys Asn Asn Lys Leu Leu Glu Val Ile Asp Val
65                  70                  75                  80
Lys Gly Met Pro Thr Glu Val Ala Lys Leu Lys Ala Lys Ile Phe Arg
            85                  90                  95
Tyr Gln Asn Arg Glu Val Pro Leu Thr Trp Ile Cys Lys Ala Pro Lys
            100                 105                 110
Tyr Thr Gly Gln Glu Trp Ile Thr Tyr Glu Glu Leu Ile Lys Val Arg
        115                 120                 125
Arg Lys Arg Lys Lys Glu Lys Met Lys Asp Gly Lys Asp
    130                 135                 140
```

```
<210> 5225
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5225
Thr Ile His Pro Gln Ala Pro Thr Lys Pro Gln Ala Lys Tyr Asn Phe
1               5                   10                  15
Leu Gly Ala Ser Asn Met Thr Gln Lys Lys Ser Glu Ala Arg Lys Leu
            20                  25                  30
Asn Ile Lys Leu Asn Ile Gln Asn Ile
            35                  40


<210> 5226
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5226
Ser Asn Tyr Pro Glu Cys Val Pro Leu Tyr Gly Leu Pro Ile Asn Gly
1               5                   10                  15
Ser Cys Leu Gly His Arg His Ile Tyr Ser Thr Tyr Ser Val Asn Thr
            20                  25                  30
Gly Arg Arg Lys Asn Thr Trp Gln Glu Thr Phe Leu
            35                  40


<210> 5227
<211> 331
<212> PRT
<213> S.epidermidis

<400> 5227
Phe Gly Val Leu Tyr Met Cys Thr Ala Ile Ser Leu Tyr Thr Lys Gln
1               5                   10                  15
Arg Tyr His Tyr Leu Ala Arg Thr Met Asp Phe Ala Phe Glu Phe Asn
            20                  25                  30
Gly Ile Pro Thr Ile Val Pro Arg His Tyr His Tyr Gln Phe Asp Leu
            35                  40                  45
Asp Ser Asp Met Arg Leu Glu Tyr Gly Phe Val Gly Thr Asn Leu Lys
        50                  55                  60
Val Gly Arg Tyr Arg Phe Gly Asp Gly Ile Asn Glu Lys Gly Leu Ala
65                  70                  75                  80
Ile Ser Asn His Tyr Phe Thr Gly Glu Ala Ser Tyr Ser Thr His Lys
                85                  90                  95
Arg Tyr Gly Tyr Phe Asn Leu Ala Pro Glu Glu Phe Ile Val Trp Val
            100                 105                 110
Leu Gly Phe Asn Lys Ser Ile Ser Glu Leu Lys Gln Lys Val Lys Lys
            115                 120                 125
Ile Asn Ile Met Asn Glu Lys Asn Thr Thr Leu Asn Ile Val Pro Pro
        130                 135                 140
Leu His Phe Met Val Thr Asp Glu Thr Gly His Thr Val Ala Ile Glu
145                 150                 155                 160
Pro His Asn Gly Leu Leu Ile Val Lys Asp Asn Tyr Val His Thr Leu
                165                 170                 175
Thr Asn Glu Pro Lys Leu Asp Trp His Leu Ser Asn Leu Arg Asn Tyr
```

```
                 180                      185                      190
Ala Phe Leu Thr Pro Gln Lys Ser Thr Asn Gln Leu Ile Gly Lys Val
        195                      200                      205
Leu Val Arg Ser Met Gly Cys Glu Ala Gly Thr Asn Gly Leu Pro Gly
        210                      215                      220
Gly Tyr Thr Ser Thr Asp Arg Phe Ile Arg Ala Thr Tyr Leu Arg His
225                      230                      235                      240
Gln Leu Arg Cys Ser His Asn Glu Asp Glu Asn Leu Met Asn Cys Phe
                 245                      250                      255
Lys Val Leu Glu Ser Val Ser Ile Pro Gln Gly Ala Val Ile Asp Ala
        260                      265                      270
Asn Lys Ile His Tyr Thr Gln Tyr Gln Leu Val Met Glu Ser Lys Glu
        275                      280                      285
Arg Ser Tyr Tyr Ile Lys Pro Tyr Phe Ser Asn Gln Ile Phe Lys Ile
        290                      295                      300
Lys Leu Thr Glu Asp Leu Leu Ser Lys Asn Glu Met Thr Phe Leu Pro
305                      310                      315                      320
Ile Asn His Glu Leu Lys Ile Thr Ser Ile Gln
                 325                      330
```

<210> 5228
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5228

```
His Thr Leu Pro Ile Glu Thr Ser Val Leu Ile Pro Ala Asn Asp Ile
1                   5                   10                      15
Ser Arg Tyr Val His Asp Ile Val Glu Thr Ile His Asp Thr Glu Phe
            20                      25                      30
Asp Glu Phe Arg His Pro Arg Gly Leu Ile
        35                      40
```

<210> 5229
<211> 47
<212> PRT
<213> S.epidermidis

<400> 5229

```
Asn Glu Pro Pro Gly Cys Val Gly Leu Lys Asn Glu Glu Arg Arg Thr
1                   5                   10                      15
Tyr Ser Met Pro Thr Ile Asn Gln Leu Val Arg Lys Pro Arg Lys Lys
            20                      25                      30
Gln Asn Glu Thr Ile Arg Phe Thr Ser Phe Lys Gln Arg Phe Gln
        35                      40                      45
```

<210> 5230
<211> 405
<212> PRT
<213> S.epidermidis

<400> 5230

```
Ala Gly Glu Pro Ala Phe Leu His Lys Lys Trp Tyr Thr Tyr His Lys
1                   5                   10                      15
Val Ile Asn Met Lys Ile Ile Asn Asn Asn Phe Thr Phe His Lys Gly
            20                      25                      30
```

```
Lys Asn Trp Ile Asn Leu Ser Gly Leu Pro Arg Lys Lys Thr Lys Arg
        35                  40                  45
Gly Glu Gln Ile Ile Trp Lys Asn Ser Ile Gly Tyr Asn Val Asn Tyr
        50                  55                  60
Phe Phe Glu Gly Ile Ser Gly Asp Ile Lys Ile Leu Asp Ser Tyr Arg
65                  70                  75                  80
Lys Asn Asp Glu Arg Tyr Leu Lys Val Glu Val Lys Asn Glu Thr Tyr
                85                  90                  95
Glu Ile Arg Ser Ser Asn Phe Lys Asn Cys Glu Ile Lys Lys Ile Val
            100                 105                 110
Thr Asp Gly Tyr Lys His Asn Leu Gly Phe Ile Ile Asn Gly Cys Lys
            115                 120                 125
Val Ile Gly Lys Arg Leu Asn Pro Arg Ser Lys Glu Arg Glu Tyr Lys
        130                 135                 140
Met Leu Cys Leu Asn Thr Asn Leu Thr Phe Tyr Arg Arg Glu Ser Arg
145                 150                 155                 160
Ile Asp Val Gly Ala Pro Ser Pro Tyr Ile Ser Gly Lys Tyr Val Tyr
                165                 170                 175
Glu Gly Asn Trp Leu Tyr Asn Glu Lys Asn Val Leu Pro Phe Leu Lys
            180                 185                 190
Asp Val Asn Asp Ala Lys Lys Tyr Thr Lys Phe Ser Arg Arg Glu Ile
            195                 200                 205
Asn Cys Val Cys Pro Asn Cys Lys Thr Glu Lys Thr Thr Pro Val Asn
        210                 215                 220
Asn Leu Val Gln Gln Gly Phe Phe Cys His Val Cys Ser Thr Asn Ile
225                 230                 235                 240
Ser Tyr Pro Glu Lys Leu Met Ile Ala Leu Leu Asn Glu Asn Ser Val
                245                 250                 255
Val Phe Glu Tyr Gln Lys Ile Phe Gln Asp Leu Lys Pro Lys Arg Phe
                260                 265                 270
Asp Phe Tyr Leu Pro Glu Tyr Asn Leu Val Ile Glu Thr His Gly Lys
            275                 280                 285
Gln His Tyr Lys Glu Asn Glu Ile Trp Tyr Arg Lys Ser Lys Glu Ser
            290                 295                 300
Asp Val Val Lys Met Ser Tyr Cys Lys Lys Lys Asn Ile Lys Tyr Val
305                 310                 315                 320
Glu Val Asp Cys Ser Leu Ser Asp Tyr Asn Phe Ile Met Asn Asn Ile
                325                 330                 335
Asn Lys Thr Glu Leu Lys His Val Leu Lys Leu Tyr Asp Lys Glu Asn
            340                 345                 350
Ile Ile Lys Arg Ile Lys Glu Leu Glu Gln Ile Lys Asp Val Asp Glu
        355                 360                 365
Ile Ile Lys Leu Tyr Lys Asn Gly Arg Asn Leu Thr Tyr Ile Ser Arg
        370                 375                 380
Asn Val Gly Leu Thr Lys Trp Lys Ile Glu Gly Leu Leu Lys Arg Leu
385                 390                 395                 400
Gly Tyr Ile Ala Arg
                405
```

```
<210> 5231
<211> 226
<212> PRT
<213> S.epidermidis

<400> 5231
Arg Arg Leu Pro Ile Met Thr Asp Glu Arg His Val Leu Val Ile Phe
```

```
1                 5                      10                     15
Pro His Pro Asp Asp Glu Thr Phe Ser Ser Ala Gly Thr Ile Ala Ser
              20                  25                  30
Tyr Ile Glu Lys Gly Ile Pro Val Thr Tyr Ala Cys Leu Thr Leu Gly
          35                  40                  45
Gln Met Gly Arg Asn Leu Gly Asn Pro Pro Phe Ala Thr Arg Glu Ser
      50                  55                  60
Leu Pro Phe Ile Arg Glu Arg Glu Leu Glu Glu Ala Cys Lys Ala Ile
65                  70                  75                  80
Gly Ile Thr Asp Leu Arg Lys Met Gly Leu Arg Asp Lys Thr Val Glu
              85                  90                  95
Phe Glu Pro Tyr Asp Gln Met Asp Gln Met Ile Gln Ser Leu Ile Asp
          100                 105                 110
Glu Thr Asn Pro Ser Leu Ile Ile Ser Phe Tyr Pro Lys Phe Ala Val
          115                 120                 125
His Pro Asp His Glu Ala Thr Ala Glu Ala Val Val Arg Thr Val Gly
      130                 135                 140
Arg Met His Glu Ser Asp Arg Pro Arg Leu Thr Leu Val Ala Phe Ser
145                 150                 155                 160
Asn Asp Ala Ser Glu Ile Leu Gly Glu Pro Asp Ile Gln Asn Asp Ile
              165                 170                 175
Ser Gln Tyr Ser Asp Ile Lys Leu Lys Ala Phe Glu Ala His Ala Ser
          180                 185                 190
Gln Thr Gly Pro Phe Leu Lys Gln Leu Ala Ser Pro Glu Ile Asp Gly
          195                 200                 205
Gln Ala Gln Ser Phe Leu Lys Ile Glu Pro Phe Trp Thr Tyr His Phe
      210                 215                 220
Glu Ser
225


<210> 5232
<211> 41
<212> PRT
<213> S.epidermidis


<400> 5232
Ile Lys Met Pro Ile Asn Glu Phe Met Lys Ile His Leu Leu Ala Ile
1                 5                      10                     15
Leu Leu Gly Ile Met Ser Gln Arg Leu Phe Ser Phe Leu Ser Ile His
              20                  25                  30
Asn Lys Tyr Cys Ile His Ile Lys Ser
          35                  40


<210> 5233
<211> 277
<212> PRT
<213> S.epidermidis


<400> 5233
Met Met Ala Leu Lys Lys Val Leu Thr Ile Ala Gly Ser Asp Thr Ser
1                 5                      10                     15
Ala Gly Ala Gly Met Gln Ala Asp Leu Lys Thr Phe Gln Glu Leu Asp
              20                  25                  30
Val Tyr Gly Met Val Ala Leu Thr Ser Ile Val Thr Met Asp Lys Glu
          35                  40                  45
Thr Trp Ser His Asp Val Thr Pro Ile Asp Met Asn Val Phe Glu Lys
```

```
        50                        55                        60
Gln Leu Glu Thr Ala Ile Ser Ile Gly Pro Asp Ala Ile Lys Thr Gly
65                       70                  75                  80
Met Leu Gly Thr Gln Asp Ile Ile Lys Arg Ala Gly Asp Val Phe Val
                85                  90                  95
Glu Ser Gly Ala Asp Tyr Phe Val Val Asp Pro Val Met Val Cys Lys
            100                 105                 110
Gly Glu Asp Glu Val Leu Asn Pro Gly Asn Thr Glu Ala Met Ile Gln
            115                 120                 125
Tyr Leu Leu Pro Lys Ala Thr Val Val Thr Pro Asn Leu Phe Glu Ala
        130                 135                 140
Gly Gln Leu Ser Gly Leu Gly Lys Leu Thr Ser Ile Glu Asp Met Lys
145                 150                 155                 160
Lys Ala Ala Gln Val Ile Tyr Asp Lys Gly Thr Pro His Val Ile Ile
                165                 170                 175
Lys Gly Gly Lys Ala Leu Asp Gln Asp Lys Ser Tyr Asp Leu Tyr Tyr
                180                 185                 190
Asp Gly Gln Gln Phe Tyr Gln Leu Thr Thr Asp Met Phe Gln Gln Ser
                195                 200                 205
Tyr Asn His Gly Ala Gly Cys Thr Phe Ala Ala Ala Thr Thr Ala Tyr
        210                 215                 220
Leu Ala Asn Gly Lys Ser Pro Lys Glu Ala Ile Ile Ala Ala Lys Ala
225                 230                 235                 240
Phe Val Ala Ser Ala Ile Lys Asn Gly Trp Lys Met Asn Asp Phe Val
                245                 250                 255
Gly Pro Val Asp His Gly Ala Tyr Asn Arg Ile Glu Gln Ile Asn Val
            260                 265                 270
Glu Val Thr Glu Val
            275


<210> 5234
<211> 200
<212> PRT
<213> S.epidermidis

<400> 5234
Phe Gln Leu Thr Arg Lys Val Arg Tyr Met Asn Leu Asn Lys Gln Gln
1                   5                   10                  15
His Glu Tyr Thr Ala Leu Cys Leu Ser Gln Thr Glu Asn Lys Ser Ser
            20                  25                  30
Glu Glu Leu Phe Glu Ser Leu Ile Glu Glu Leu Lys Pro Leu Ile Tyr
        35                  40                  45
Asn Lys Ile Arg Tyr Ile Ser His Asn Lys Tyr Asp Ile Glu Asp Met
        50                  55                  60
Tyr Gln Glu Ile Val Ile Lys Phe Tyr Arg Ala Leu Gln Lys Phe Asp
65                  70                  75                  80
Tyr Gln Gln Gly Val Pro Ile Glu His Tyr Ile Tyr Phe Leu Ile Arg
                85                  90                  95
Ser Val Lys Tyr Asp Tyr Leu Arg Lys Val Lys Ala Asn Tyr Lys Arg
            100                 105                 110
Gln Pro Leu Leu Val Asn Glu Tyr Ile Val Glu Tyr Asn Ala Thr Leu
        115                 120                 125
Ala Leu Asn Asp Ile Glu Arg Ser Ile Ile Arg Lys Glu Leu Thr Leu
        130                 135                 140
Ala Phe Lys Arg Ser Glu Val Lys Leu Ser Arg Met Glu Arg Arg Ile
145                 150                 155                 160
```

```
Ile Arg Leu Leu Leu Asn Asp Tyr Lys Pro Lys Glu Ile Ala Met Val
                165                 170                 175
Leu Asn Leu Glu Ser Lys Val Val Tyr Asn Ala Ile Gln Arg Ser Lys
            180                 185                 190
Cys Lys Leu Lys Arg Ser Phe Glu
        195                 200
```

<210> 5235
<211> 50
<212> PRT
<213> S.epidermidis

<400> 5235
```
Gln Thr Glu Leu Arg Arg Arg Leu Arg Gln Thr Leu Leu Asn Arg Ser
1               5                   10                  15
Tyr Tyr Cys Glu Gly Val Lys Leu Asn Ser Val Ser Leu Leu Leu Phe
            20                  25                  30
Tyr Ile Ala Leu Ile Val Leu Asn Val Ser Asn Asn Leu Phe Thr Leu
        35                  40                  45
Phe Leu
    50
```

<210> 5236
<211> 91
<212> PRT
<213> S.epidermidis

<400> 5236
```
Ser Lys Tyr Thr Glu Val Val Lys Leu Arg His Lys Leu Leu Lys Thr
1               5                   10                  15
Ala Asn Asp Leu Asn Lys Leu Ile Leu His Ser Asp Glu Lys Val Lys
            20                  25                  30
Ala Glu Phe His Thr Phe Asp Asn Gly Glu Val Gly Ile Thr Phe Trp
        35                  40                  45
His Tyr Ser Gln Lys Tyr Glu Ser Asp Cys Asn His Leu Asn Phe Tyr
    50                  55                  60
Glu Phe Phe Thr Asp Lys Glu Leu Gln Arg Ser Phe Glu Leu Ala Lys
65                  70                  75                  80
Asp Val Ile Ala Gly Glu Cys Leu Ile Asp Glu
                85                  90
```

<210> 5237
<211> 112
<212> PRT
<213> S.epidermidis

<400> 5237
```
Ser Ala Asp Thr Met Leu Thr Lys Leu Leu Thr Thr Ser Gly Asn Asp
1               5                   10                  15
Val Glu Tyr Thr Ile Asn Pro Gln Ala Ile Ile Lys Gly Asn Thr Ser
            20                  25                  30
Phe Leu Leu Lys Pro Lys Phe Leu Ile Ile Ala Lys Ala Ile Gly Val
        35                  40                  45
Lys Ile Lys Val Ala Pro Ser Leu Ala Lys Asn Ala Ala Ile Ile Ala
    50                  55                  60
Pro Asn Ile Met Ile Asn Thr Asn Ile Phe Asn Pro Cys Pro Cys Asp
```

```
65                      70                      75                      80
  Ala Leu Thr Ile Cys Met Ala Asp His Ser Lys Asn Pro Ile Ser Ser
                    85                      90                      95
  Arg Ile Asn Glu Ile Arg Ile Thr Ala Thr Lys Val Ser Val Ala Phe
                   100                     105                     110
```

<210> 5238
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5238
```
Lys Tyr Asn Thr Asn His Asn Thr Ser Leu Lys Ile Asn Lys Lys Lys
1                   5                   10                      15
Ser Ser Ile Lys Phe Leu Leu Leu Thr Val Ile Ile Glu Asp Lys Val
                20                      25                      30
Tyr Val Lys Val Phe Lys Asn Met
            35                  40
```

<210> 5239
<211> 58
<212> PRT
<213> S.epidermidis

<400> 5239
```
Thr Lys Leu Thr Gly Cys Leu Met Tyr Lys Glu Tyr Asn Met Thr Gln
1                   5                   10                      15
His Thr Leu Pro Ile Glu Thr Ser Val Leu Ile Pro Thr Asn Asn Ile
                20                      25                      30
Ser Arg His Val Asn Asp Ile Val Glu Thr Ile Pro Asp Thr Glu Phe
            35                      40                      45
Asp Glu Phe Arg His His Arg Gly Leu Ile
        50                      55
```

<210> 5240
<211> 56
<212> PRT
<213> S.epidermidis

<400> 5240
```
Pro Asn Val Thr Ala Cys Ser Pro Ile Arg Ile Ile Phe Pro Val Asp
1                   5                   10                      15
Ser Pro Tyr Pro Cys Leu Val Met Phe Ser His Leu Tyr Ile Pro Ser
                20                      25                      30
Leu Lys Tyr His Phe Ile Arg Cys Thr Asp Asp Val Arg Met Ile Asp
            35                      40                      45
Leu Leu Phe Tyr Val Ile Leu Ile
        50                      55
```

<210> 5241
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5241
```
Val Leu Ser Thr Ser Leu Phe Asn Phe Asn Leu Ser Asp Ser Thr Cys
```

```
1                   5                         10                        15
Gln Phe Lys Ile Asp Leu Phe Ile Leu Asn Arg Arg Cys Leu Asn Gly
                20                      25                   30
Gln Glu Lys Ser Asn Ile Arg Met Tyr Gly Met Trp Leu Ser Ile Ser
            35                      40                   45
```

<210> 5242
<211> 173
<212> PRT
<213> S.epidermidis

<400> 5242

```
Gly Ile Pro Thr His Met Lys Lys Asn His Asp Tyr Met Arg Leu Ala
1                   5                         10                        15
Ile Asn Glu Ala His Lys Ala Lys Ala Leu Gly Glu Val Pro Ile Gly
                20                      25                   30
Ala Val Ile Val Lys Glu Asp Gln Val Ile Ala Arg Ala His Asn Leu
            35                      40                   45
Arg Glu Thr Leu Gln Gln Pro Thr Ala His Ala Glu His Ile Ala Ile
        50                      55                   60
Glu Arg Ala Ser Glu Val Val Gly Ser Trp Arg Leu Glu Glu Cys Thr
65                      70                      75                      80
Leu Tyr Val Thr Leu Glu Pro Cys Val Met Cys Ala Gly Thr Ile Ile
                85                      90                      95
Met Ser Arg Ile Pro Lys Val Val Tyr Gly Ala Thr Asp Pro Lys Gly
            100                     105                  110
Gly Cys Ser Gly Ser Leu Met Asn Leu Leu Glu Gln Pro Gln Phe Asn
            115                     120                  125
His Arg Ala Ile Val Glu Lys Gly Ile Leu Glu Glu Glu Cys Ala Glu
        130                     135                  140
Leu Leu Arg Ser Phe Phe Lys Glu Ile Arg Glu Lys Lys Lys Ala Glu
145                     150                     155                     160
Lys Gln Gly Lys Ile Gln Lys Asp Ile Asn Leu Leu Lys
                165                     170
```

<210> 5243
<211> 175
<212> PRT
<213> S.epidermidis

<400> 5243

```
Arg Met Ala Thr Cys Ala Arg Leu Cys Arg Leu Tyr Lys Lys Gln Thr
1                   5                         10                        15
Gln Ile Lys Gly Val Phe Met Gly Leu Tyr Glu Lys Met Leu Ile Glu
                20                      25                   30
His Asp Tyr Ile Glu Val Arg Glu Thr Asp Val Met Pro Asn Asp Leu
            35                      40                   45
His Gly Leu Trp Leu Gly Asp Leu Ile Leu Ile Lys Arg Asn Leu Ser
        50                      55                   60
Glu Ile Arg Lys Ala Glu Val Leu Tyr Glu Glu Leu Ala His His Lys
65                      70                      75                      80
Leu Thr Tyr Gly Asn Ile Leu Asp Gln Ser Lys Phe Asn Asn Arg Lys
                85                      90                      95
Phe Glu Asn Tyr Ala Arg Arg Tyr Gly Tyr Glu Thr Ala Leu Pro Leu
            100                     105                  110
Arg Ile Ile Val Glu Ala His Asn Tyr Gly Val Ser Asn Leu Tyr Glu
```

```
          115                  120                  125
Leu Ala Glu Tyr Val Gln Leu Ser Glu Glu Tyr Ile Ser Glu Ile Leu
     130                  135                  140
Lys His Tyr Lys Asn Lys Tyr Gly Ile Gly Thr Asn Tyr Gly Glu Tyr
145                  150                  155                  160
Leu Ile Thr Phe Asp Pro Leu Arg Val Phe Lys Tyr Lys Glu Ile
               165                  170                  175
```

<210> 5244
<211> 84
<212> PRT
<213> S.epidermidis

<400> 5244

```
Tyr Ser Lys Thr Thr Leu Phe Ser Phe Asn Lys Ala Ile Ile Asn Phe
1               5                  10                  15
Ser Gly Tyr Asp Met Leu Val Glu His Thr Trp Gln Lys Lys Pro Cys
               20                  25                  30
Trp Thr Lys Leu Leu Thr Gly Val Val Phe Ser Val Leu Gln Leu Gly
          35                  40                  45
Gln Thr Gln Phe Ile Ser Leu Leu Glu Asn Phe Val Tyr Phe Phe Ala
     50                  55                  60
Ser Leu Thr Ser Phe Lys Lys Gly Lys Thr Phe Phe Ser Leu Tyr Asn
65                  70                  75                  80
Gln Phe Pro Ser
```

<210> 5245
<211> 308
<212> PRT
<213> S.epidermidis

<400> 5245

```
Glu Asn Met Thr Arg Gln Gly Tyr Gly Glu Ser Thr Gly Lys Ile Ile
1               5                  10                  15
Leu Met Gly Glu His Ala Val Thr Phe Gly Gln Pro Ala Ile Ala Ile
          20                  25                  30
Pro Phe Asn Ala Gly Lys Ile Lys Val Leu Ile Glu Ser Leu Asp Glu
          35                  40                  45
Gly Asn Tyr Ser Ser Ile Thr Ser Asp Val Tyr Asp Gly Met Leu Tyr
     50                  55                  60
Asp Ala Pro Glu His Leu Lys Ser Ile Ile Asn Arg Phe Val Glu Lys
65                  70                  75                  80
Ser Gly Val Lys Glu Pro Leu Ser Val Lys Ile Gln Thr Asn Leu Pro
               85                  90                  95
Pro Ser Arg Gly Leu Gly Ser Ser Ala Ala Val Ala Val Ala Phe Val
               100                 105                 110
Arg Ala Ser Tyr Asp Phe Met Asp Gln Pro Leu Asp Asp Lys Thr Leu
          115                 120                 125
Ile Lys Glu Ala Asn Trp Ala Glu Gln Ile Ala His Gly Lys Pro Ser
     130                 135                 140
Gly Ile Asp Thr Gln Thr Ile Val Ser Asn Lys Pro Val Trp Phe Lys
145                 150                 155                 160
Gln Gly Gln Ala Glu Thr Leu Lys Ser Leu Lys Leu Asn Gly Tyr Met
               165                 170                 175
Val Val Ile Asp Thr Gly Val Lys Gly Ser Thr Lys Gln Ala Val Glu
```

```
                 180                      185                      190
Asp Val His Val Leu Cys Glu Ser Asp Glu Tyr Met Lys Tyr Ile Glu
         195                      200                      205
His Ile Gly Thr Leu Val His Ser Ala Ser Glu Ser Ile Glu Gln His
         210                      215                      220
Asp Phe His His Leu Ala Asp Ile Phe Asn Ala Cys Gln Glu Asp Leu
225                      230                      235                      240
Arg His Leu Thr Val Ser His Asp Lys Ile Glu Lys Leu Leu Gln Ile
                 245                      250                      255
Gly Lys Glu His Gly Ala Ile Ala Gly Lys Leu Thr Gly Gly Gly Arg
         260                      265                      270
Gly Gly Ser Met Leu Leu Leu Ala Glu Asn Leu Lys Thr Ala Lys Thr
         275                      280                      285
Ile Val Ala Ala Val Glu Lys Ala Gly Ala Ala His Thr Trp Ile Glu
         290                      295                      300
His Leu Gly Gly
305
```

```
<210> 5246
<211> 69
<212> PRT
<213> S.epidermidis

<400> 5246
Pro Gln Met Thr Leu Gly Asn Arg Ile Lys Gln His Arg Gln Asp Lys
1                   5                       10                      15
Gly Leu Asn Met Arg Glu Phe Gly Glu Phe Ile Asp Asn Ala Ser Asp
                 20                      25                      30
Ser Ile Val Ser Arg Trp Glu Arg Asn Ile Ser Val Pro Asn Ala Lys
         35                      40                      45
Arg Leu Lys Leu Ile Ala Asp Asp Met Asn Ile Thr Val Thr Glu Leu
         50                      55                      60
Leu Lys Gly Val Lys
65
```

```
<210> 5247
<211> 146
<212> PRT
<213> S.epidermidis

<400> 5247
Tyr Thr Met Thr Lys Leu Asn Leu Lys Gln Gln Ala Phe Val Asp Glu
1                   5                       10                      15
Tyr Ile Lys Thr Gly Thr Ala Tyr Gln Ser Ala Ile Arg Ala Gly Tyr
                 20                      25                      30
Ser Glu Lys Tyr Ala Lys Ser Ser Ser His Lys Leu Leu Glu Asn Val
         35                      40                      45
Gly Ile Lys Ala Glu Ile Asp Lys Arg Met Glu Lys Leu Lys Lys Asp
         50                      55                      60
Ser Ile Ala Asp Gln Asp Glu Ile Leu Gln Tyr Leu Thr Ser Val Leu
65                      70                      75                      80
Arg Gly Glu Val Thr Asp Gln Glu Leu Ile Pro Ile Gln Val Gly Arg
                 85                      90                      95
Gly Glu Met Glu Val Glu Glu Leu Glu Lys Arg Ser Asp Thr Asn Ala
                 100                     105                     110
Arg Thr Lys Ala Ala Glu Leu Leu Gly Lys Arg Tyr Met Met Trp Thr
```

```
               115                    120                    125
Asp Lys Gln Gln Ile Glu Thr Thr Ala Met Val His Phe Asp Asp Asp
        130                    135                    140
Ile Asn
145


<210> 5248
<211> 67
<212> PRT
<213> S.epidermidis


<400> 5248
Pro Pro Thr Ala Phe Val Pro Asn Ala Ile Gly Lys Thr Leu Thr Ser
1               5                   10                  15
Asp Leu Pro Asn Arg Thr Cys Phe Thr Ile Lys Ser His Leu Leu Tyr
        20                    25                    30
Leu Lys Tyr Leu Asn Ile Leu Tyr Pro Asn His Asn Leu Phe Ile His
        35                    40                    45
Val Asn Tyr Leu Leu Glu Ala Ser Ile Leu Thr Leu Lys Ser Leu Tyr
        50                    55                    60
Ala Leu Met
65


<210> 5249
<211> 248
<212> PRT
<213> S.epidermidis


<400> 5249
Tyr Thr Tyr Ala Tyr Gly Cys Thr Ala Phe Cys Tyr Ser Gly Lys Glu
1               5                   10                  15
Thr Thr Ser Cys Leu Gly Phe Glu Tyr Gly Gly Leu Ile Asn Thr Leu
        20                    25                    30
Glu Ala Ala Arg Arg Tyr Gln Leu Lys Tyr Phe Thr Pro Ser Ser Ile
        35                    40                    45
Gly Ala Phe Gly Ile Ser Thr Pro Lys Val Asn Thr Pro Gln Leu Thr
        50                    55                    60
Ile Gln Gln Pro Thr Thr Met Tyr Gly Ile Asn Lys Val Thr Gly Glu
65                    70                    75                  80
Leu Leu Cys Gln Tyr Tyr Tyr Val Lys Phe Gly Val Asp Thr Arg Ser
              85                    90                    95
Val Arg Phe Pro Gly Leu Ile Ser His Val Lys Glu Pro Gly Gly Gly
            100                   105                   110
Ile Thr Asp Tyr Ala Val Asp Met Tyr Phe Lys Ala Val Arg Lys Gly
        115                   120                   125
His Tyr Thr Ser Tyr Ile Asn Arg Tyr Thr Tyr Met Asp Met Met Tyr
        130                   135                   140
Met Glu Asp Ala Ile Asp Ala Ile Ile Lys Leu Met Glu Glu Asp Ser
145                   150                   155                 160
Val Lys Leu Lys Thr Arg Asn Gly Tyr Asn Leu Ser Ala Met Ser Ile
              165                   170                   175
Glu Pro Glu Met Leu Lys Gln Ala Ile Gln Val Tyr Tyr Pro Asp Phe
            180                   185                   190
Thr Leu Asp Tyr Asp Ile Asp Leu Glu Arg Gln Asp Ile Ala Leu Ser
        195                   200                   205
Trp Pro Asp Ser Ile Asp Thr Ser Cys Ala Gln Glu Glu Trp Gly Phe
```

```
          210                     215                     220
Asp Pro Lys Tyr Asp Leu Pro Thr Met Thr Lys Val Met Leu Glu Ala
225                     230                     235                     240
Ile Glu Lys Lys Gln Lys Glu Cys
                    245
```

<210> 5250
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5250
```
Thr Gly Ser Ala Ser Lys Ser Ala Arg Asn Ala Ile Val Gly Pro Phe
1               5                   10                  15
Glu Ser Asp Pro Leu Lys Val Ala Phe Ile Pro Leu Arg Pro Thr Gly
            20                  25                  30
Val Ser Met Val His Ala Asn Trp Leu Asn
        35                  40
```

<210> 5251
<211> 118
<212> PRT
<213> S.epidermidis

<400> 5251
```
Met Glu Ile Ala Lys Met Arg Val Lys Asn Lys Tyr Phe Ser Ile Thr
1               5                   10                  15
Pro Asn Val Val Glu Lys Met Lys Glu Ala Asp Ile Asn Pro Asp Ile
            20                  25                  30
Leu Arg Gln Arg Leu Ala Ser Gly Trp Lys Phe Glu Asp Ala Ile Glu
        35                  40                  45
Ala Pro Leu Gly Val Arg Arg Ser Glu Trp Asp Ser Leu Lys Pro Lys
    50                  55                  60
Glu Asp Gly Ile Ala Ser Tyr Lys Glu Arg Met Ala Gln Arg Arg Leu
65                  70                  75                  80
Gln Glu Leu Lys Arg Lys Lys Pro His Leu Phe Thr Val Pro Gln Lys
                85                  90                  95
His Pro Arg Ser Glu Trp Cys Thr Tyr Leu Met Glu Asn Asp Ile Phe
            100                 105                 110
Pro Arg Lys Val Ala Lys
        115
```

<210> 5252
<211> 105
<212> PRT
<213> S.epidermidis

<400> 5252
```
Val Met Asn Ala Gln Asp Val Lys Ile Leu Asn Asn Leu Ser Leu Asp
1               5                   10                  15
Asp Thr Ser Asn Asp Glu Thr Ile Glu Leu Leu Ile Glu Lys Tyr Leu
            20                  25                  30
Asn Val Ala Glu Glu Tyr Cys Asn Gln Thr Phe Asn Arg Gln Ser Leu
        35                  40                  45
Pro Ser Asn Val Glu Lys Phe Ile Ala Asn Cys Ile Lys Gln Gly Thr
    50                  55                  60
```

```
Thr Ser Asn Ile Ser Ser Arg Thr Met Gly Thr Val Ser Tyr Thr Phe
65                  70                  75                  80
Val Thr Asp Leu Pro Lys Glu Thr Tyr Gly Tyr Leu Lys Pro Phe Arg
                85                  90                  95
Arg Leu Arg Trp Thr Gly Tyr His Val
            100                 105
```

<210> 5253
<211> 81
<212> PRT
<213> S.epidermidis

<400> 5253
```
Ser Ser Leu Ala Pro Val Ser Gly Asn Leu Ser Phe Val Phe Leu Ser
1               5                   10                  15
Glu Leu Leu Ser Asn Pro Glu Ser Leu Ser Glu Ser Glu Ser Leu Ser
            20                  25                  30
Glu Ser Glu Ser Leu Ser Glu Ser Glu Ser Leu Ser Glu Ser Glu Ser
        35                  40                  45
Leu Ser Glu Ser Glu Ser Leu Ser Glu Ser Glu Ser Leu Ser Glu Ser
    50                  55                  60
Glu Ser Ser Leu Ser Glu Ser Glu Ser Leu Ser Glu Ser Glu Ser Ser
65                  70                  75                  80
Ser
```

<210> 5254
<211> 176
<212> PRT
<213> S.epidermidis

<400> 5254
```
Ile Met Lys Ala Ile Pro Lys Ile Phe Asp Lys Glu Lys Gly Gln Trp
1               5                   10                  15
Ile Glu Leu Met Ala Lys Pro Ile Ala Glu Glu Val Val Lys Ile Met
            20                  25                  30
Lys Glu Asp Trp Leu Ser Asn Lys Lys Thr Ile Asp Tyr Trp Leu Leu
        35                  40                  45
Gln Tyr Thr Glu Gly Val Val Glu Pro Ile Gln Val Ala Ile Phe Thr
    50                  55                  60
Asp Gly Asn Glu Val Asp Glu Ile Leu Lys Ser Asn Leu Glu Trp Met
65                  70                  75                  80
Phe Asn Gly Tyr Val Ser Asn Leu Glu Asn Lys Lys Leu Phe Asn Leu
                85                  90                  95
Gln Asp Phe Ile Asn Tyr Cys Tyr Ser Thr Lys Thr Glu Leu Pro Lys
                100                 105                 110
Gln Phe Lys Val Asn Ala Ile Val Lys Phe Asp Ser Leu Asp Glu Pro
            115                 120                 125
Ile Lys Leu Gln Glu Ile Asp Asn Ile Thr Thr Asn Pro Asp Val Leu
    130                 135                 140
Gly Ile Leu Asp Glu Thr Ser Glu Gly Ser Ile Glu Val Lys Tyr Ile
145                 150                 155                 160
Tyr Asn Asp His Ser Ile Glu Asp Lys Lys Leu Ile Lys Glu Asn Lys
                165                 170                 175
```

<210> 5255

<211> 342
<212> PRT
<213> S.epidermidis

<400> 5255
Lys Val Arg Ala Arg Cys Leu Met Met Ser Asn Ile His Thr Asn Ile
1   5   10   15
Ser Glu Trp Met Lys Met Ser Glu Glu Thr Pro Val Ile Ile Ser Ser
            20   25   30
Arg Ile Arg Leu Ala Arg Asn Leu Glu Asn His Val His Pro Leu Met
        35   40   45
Phe Pro Ser Glu Gln Glu Gly Tyr Arg Val Ile Asn Glu Val Gln Asp
    50   55   60
Ala Leu Ser Asn Leu Thr Leu Asn Arg Leu Asp Thr Met Asp Gln Gln
65   70   75   80
Ser Lys Met Lys Leu Val Ala Lys His Leu Val Ser Pro Glu Leu Val
                85   90   95
Lys Gln Pro Ala Ser Ala Val Met Leu Asn Asp Asp Glu Ser Val Ser
            100   105   110
Val Met Ile Asn Glu Glu Asp His Ile Arg Ile Gln Ala Leu Gly Thr
            115   120   125
Asp Leu Ser Leu Lys Asp Leu Tyr Gln Arg Ala Ser Lys Ile Asp Asp
    130   135   140
Glu Leu Asp Lys Ala Leu Asp Ile Ser Tyr Asp Glu His Leu Gly Tyr
145   150   155   160
Leu Thr Thr Cys Pro Thr Asn Ile Gly Thr Gly Met Arg Ala Ser Val
            165   170   175
Met Leu His Leu Pro Gly Leu Ser Ile Met Lys Arg Met Asn Arg Ile
        180   185   190
Ala Gln Thr Ile Asn Arg Phe Gly Phe Thr Ile Arg Gly Ile Tyr Gly
        195   200   205
Glu Gly Ser Gln Val Tyr Gly His Ile Tyr Gln Val Ser Asn Gln Leu
    210   215   220
Thr Leu Gly Lys Thr Glu Glu Asp Ile Ile Asp Asn Leu Thr Glu Val
225   230   235   240
Val Asn Gln Ile Ile Asn Glu Glu Lys Gln Ile Arg Glu Arg Leu Asp
            245   250   255
Lys His Asn Ser Val Glu Thr Leu Asp Arg Val Tyr Arg Ser Leu Gly
            260   265   270
Val Leu Gln Asn Ser Arg Ile Ile Ser Met Glu Glu Ala Ser Tyr Arg
        275   280   285
Leu Ser Glu Val Lys Leu Gly Ile Asp Leu Asn Tyr Ile Leu Leu Glu
    290   295   300
Asn Phe Lys Phe Asn Glu Leu Met Val Ala Ile Gln Ser Pro Phe Leu
305   310   315   320
Ile Asp Asp Asp Asp Asn Arg Thr Val Asn Glu Lys Arg Ala Asp Leu
            325   330   335
Leu Arg Glu His Ile Lys
            340

<210> 5256
<211> 1185
<212> PRT
<213> S.epidermidis

<400> 5256

```
Ile Cys Leu Ala Gly Gln Val Val Gln Tyr Gly Arg His Arg Lys Arg
1               5                   10                  15
Arg Asn Tyr Ala Arg Ile Ser Glu Val Leu Glu Leu Pro Asn Leu Ile
            20                  25                  30
Glu Ile Gln Thr Lys Ser Tyr Asp Trp Phe Leu Lys Glu Gly Leu Leu
        35                  40                  45
Glu Met Phe Arg Asp Ile Ser Pro Ile Glu Asp Phe Thr Gly Asn Leu
    50                  55                  60
Ser Leu Glu Phe Val Asp Tyr Arg Leu Gly Glu Pro Lys Tyr Asp Leu
65                  70                  75                  80
Glu Glu Ser Lys Asn Arg Asp Ala Thr Tyr Ala Ala Pro Leu Arg Val
                85                  90                  95
Lys Val Arg Leu Ile Ile Lys Glu Thr Gly Glu Val Lys Glu Gln Glu
            100                 105                 110
Val Phe Met Gly Asp Phe Pro Leu Met Thr Asp Thr Gly Thr Phe Val
        115                 120                 125
Ile Asn Gly Ala Glu Arg Val Ile Val Ser Gln Leu Val Arg Ser Pro
    130                 135                 140
Ser Val Tyr Phe Asn Glu Lys Ile Asp Lys Asn Gly Arg Glu Asn Tyr
145                 150                 155                 160
Asp Ala Thr Ile Ile Pro Asn Arg Gly Ala Trp Leu Glu Tyr Glu Thr
                165                 170                 175
Asp Ala Lys Asp Val Val Tyr Val Arg Ile Asp Arg Thr Arg Lys Leu
            180                 185                 190
Pro Leu Thr Val Leu Leu Arg Ala Leu Gly Phe Ser Thr Asp Gln Glu
        195                 200                 205
Ile Val Asp Leu Leu Gly Asp Ser Glu Tyr Leu Arg Asn Thr Leu Glu
    210                 215                 220
Lys Asp Gly Thr Glu Asn Thr Glu Gln Ala Leu Leu Glu Ile Tyr Glu
225                 230                 235                 240
Arg Leu Arg Pro Gly Glu Pro Pro Thr Val Glu Asn Ala Lys Ser Leu
                245                 250                 255
Leu Tyr Ser Arg Phe Phe Asp Pro Lys Arg Tyr Asp Leu Ala Ser Val
                260                 265                 270
Gly Arg Tyr Lys Ala Asn Lys Lys Leu His Leu Lys His Arg Leu Phe
            275                 280                 285
Asn Gln Lys Leu Ala Glu Pro Ile Val Asn Ser Glu Thr Gly Glu Ile
    290                 295                 300
Val Val Asp Glu Gly Thr Val Leu Asp Arg Arg Lys Leu Asp Glu Ile
305                 310                 315                 320
Met Asp Val Leu Glu Thr Asn Ala Asn Ser Glu Val Phe Glu Leu Glu
            325                 330                 335
Gly Ser Val Ile Asp Glu Pro Val Glu Ile Gln Ser Ile Lys Val Tyr
        340                 345                 350
Val Pro Asn Asp Glu Glu Gly Arg Thr Thr Thr Val Ile Gly Asn Ala
    355                 360                 365
Leu Pro Asp Ser Glu Val Lys Cys Ile Thr Pro Ala Asp Ile Val Ala
    370                 375                 380
Ser Met Ser Tyr Phe Phe Asn Leu Leu Asn Gly Ile Gly Tyr Thr Asp
385                 390                 395                 400
Asp Ile Asp His Leu Gly Asn Arg Arg Leu Arg Ser Val Gly Glu Leu
            405                 410                 415
Leu Gln Asn Gln Phe Arg Ile Gly Leu Ser Arg Met Glu Arg Val Val
            420                 425                 430
Arg Glu Arg Met Ser Ile Gln Asp Thr Asp Ser Ile Thr Pro Gln Gln
            435                 440                 445
```

Leu Ile Asn Ile Arg Pro Val Ile Ala Ser Ile Lys Glu Phe Phe Gly
    450   455   460
Ser Ser Gln Leu Ser Gln Phe Met Asp Gln Ala Asn Pro Leu Ala Glu
465   470   475   480
Leu Thr His Lys Arg Arg Leu Ser Ala Leu Gly Pro Gly Gly Leu Thr
                485   490   495
Arg Glu Arg Ala Gln Met Glu Val Arg Asp Val His Tyr Ser His Tyr
                500   505   510
Gly Arg Met Cys Pro Ile Glu Thr Pro Glu Gly Pro Asn Ile Gly Leu
            515   520   525
Ile Asn Ser Leu Ser Ser Tyr Ala Arg Val Asn Glu Phe Gly Phe Ile
        530   535   540
Glu Thr Pro Tyr Arg Lys Val Asp Leu Asp Thr Asn Ser Ile Thr Asp
545   550   555   560
Gln Ile Asp Tyr Leu Thr Ala Asp Glu Glu Asp Ser Tyr Val Val Ala
                565   570   575
Gln Ala Asn Ser Arg Leu Asp Glu Asn Gly Arg Phe Leu Asp Asp Glu
            580   585   590
Val Val Cys Arg Phe Arg Gly Asn Asn Thr Val Met Ala Lys Glu Lys
            595   600   605
Met Asp Tyr Met Asp Val Ser Pro Lys Gln Val Val Ser Ala Ala Thr
    610   615   620
Ala Cys Ile Pro Phe Leu Glu Asn Asp Asp Ser Asn Arg Ala Leu Met
625   630   635   640
Gly Ala Asn Met Gln Arg Gln Ala Val Pro Leu Met Ile Pro Glu Ala
            645   650   655
Pro Phe Val Gly Thr Gly Met Glu His Val Ala Ala Arg Asp Ser Gly
            660   665   670
Ala Ala Ile Thr Ala Lys His Arg Gly Arg Val Glu His Val Glu Ser
        675   680   685
Asn Glu Ile Leu Val Arg Arg Leu Val Glu Glu Asn Gly Thr Glu His
    690   695   700
Glu Gly Glu Leu Asp Arg Tyr Pro Leu Ala Lys Phe Lys Arg Ser Asn
705   710   715   720
Ser Gly Thr Cys Tyr Asn Gln Arg Pro Ile Val Ser Ile Gly Asp Val
            725   730   735
Val Glu Tyr Asn Glu Ile Leu Ala Asp Gly Pro Ser Met Glu Leu Gly
            740   745   750
Glu Met Ala Leu Gly Arg Asn Val Val Val Gly Phe Met Thr Trp Asp
    755   760   765
Gly Tyr Asn Tyr Glu Asp Ala Val Ile Met Ser Glu Arg Leu Val Lys
    770   775   780
Asp Asp Val Tyr Thr Ser Ile His Ile Glu Glu Tyr Glu Ser Glu Ala
785   790   795   800
Arg Asp Thr Lys Leu Gly Pro Glu Glu Ile Thr Arg Asp Ile Pro Asn
                805   810   815
Val Ser Glu Ser Ala Leu Lys Asn Leu Asp Asp Arg Gly Ile Val Tyr
            820   825   830
Val Gly Ala Glu Val Lys Asp Gly Asp Ile Leu Val Gly Lys Val Thr
            835   840   845
Pro Lys Gly Val Thr Glu Leu Thr Ala Glu Glu Arg Leu Leu His Ala
    850   855   860
Ile Phe Gly Glu Lys Ala Arg Glu Val Arg Asp Thr Ser Leu Arg Val
865   870   875   880
Pro His Gly Ala Gly Gly Ile Val Leu Asp Val Lys Val Phe Asn Arg
                885   890   895

Glu Glu Gly Asp Asp Thr Leu Ser Pro Gly Val Asn Gln Leu Val Arg
     900   905   910

Val Tyr Ile Val Gln Lys Arg Lys Ile His Val Gly Asp Lys Met Cys
     915   920   925

Gly Arg His Gly Asn Lys Gly Val Ile Ser Lys Ile Val Pro Glu Glu
     930   935   940

Asp Met Pro Tyr Leu Pro Asp Gly Arg Pro Ile Asp Ile Met Leu Asn
945 ·   950   955   960

Pro Leu Gly Val Pro Ser Arg Met Asn Ile Gly Gln Val Leu Glu Leu
     965   970   975

His Leu Gly Met Ala Ala Lys Asn Leu Gly Ile His Val Ala Ser Pro
     980   985   990

Val Phe Asp Gly Ala Asn Asp Asp Val Trp Ser Thr Ile Glu Glu
     995   1000   1005

Ala Gly Met Ala Arg Asp Gly Lys Thr Val Leu Tyr Asp Gly Arg Thr
    1010   1015   1020

Gly Glu Pro Phe Asp Asn Arg Ile Ser Val Gly Val Met Tyr Met Leu
1025   1030   1035   1040

Lys Leu Ala His Met Val Asp Asp Lys Leu His Ala Arg Ser Thr Gly
    1045   1050   1055

Pro Tyr Ser Leu Val Thr Gln Gln Pro Leu Gly Gly Lys Ala Gln Phe
    1060   1065   1070

Gly Gly Gln Arg Phe Gly Glu Met Glu Val Trp Ala Leu Glu Ala Tyr
    1075   1080   1085

Gly Ala Ala Tyr Thr Leu Gln Glu Ile Leu Thr Tyr Lys Ser Asp Asp
    1090   1095   1100

Thr Val Gly Arg Val Lys Thr Tyr Glu Ser Ile Val Lys Gly Glu Asn
1105   1110   1115   1120

Ile Ser Arg Pro Ser Val Pro Glu Ser Phe Arg Val Leu Met Lys Glu
    1125   1130   1135

Leu Gln Ser Leu Gly Leu Asp Val Lys Val Met Asp Glu His Asp Asn
    1140   1145   1150

Glu Ile Glu Met Ala Asp Val Asp Asp Glu Asp Ala Ala Glu Arg Lys
    1155   1160   1165

Val Asp Leu Gln Gln Lys Ser Ala Pro Glu Ser Gln Lys Glu Thr Thr
    1170   1175   1180

Asp
1185

<210> 5257
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5257
Leu Ser Gln Ala Phe Tyr Leu Leu Ala Ile Asp Asn Arg Val Glu Leu
1   5   10   15

Gly Leu Ile Ser Ile Phe Asn Ser Ser Pro His Tyr Gln Val Arg Gln
     20   25   30

Arg Ile Thr Tyr Ala Phe Tyr Leu Thr Leu Leu Asn Leu Ile Phe Asn
     35   40   45

Val Ile Ile Val Val Thr Gln Tyr Ala Lys Leu Lys Leu
     50   55   60

<210> 5258
<211> 173

<212> PRT
<213> S.epidermidis

<400> 5258
Met Asp Phe Leu Gln Gln Asn Trp Thr Asn Ile Leu Lys Ile Ile Val
1   5   10   15
Ser Leu Ile Ser Ile Val Thr Phe Ile Arg Val Phe Leu Tyr Glu Arg
            20   25   30
Ser Arg Leu Lys Val Asn Ile Ile Gly Tyr Asp Gln Ile Glu Glu Tyr
        35   40   45
Leu Asp Val Tyr Ile Ser Phe Ser Asn Ser Ser Lys Leu Pro Ile Ser
    50   55   60
Ile Asn Glu Ile Gln Ile Phe His Lys Asn Thr Met Ile Gly Glu Ile
65   70   75   80
Glu Asn Phe Thr Glu Lys Ile Leu Gly Gln Thr Asp Gly Lys Ser Ile
            85   90   95
Val Tyr Ser Asn Pro Met Pro Leu Asn Leu Asn Ser Tyr Ser Ser Asp
            100   105   110
Lys Asp Leu Phe Arg Ile Lys Leu Val Glu Glu Leu Pro Leu Asn Lys
        115   120   125
Thr Leu Thr Phe Lys Phe Ile Thr Thr Arg Lys Asn Ile Thr Tyr Lys
    130   135   140
Ile Lys Asp Phe Lys Leu Pro Gln Tyr Arg Arg Ser Phe His Arg Lys
145   150   155   160
Leu Lys His His Lys Lys Val Ser Asn Lys Asn Lys Asp
                165   170

<210> 5259
<211> 291
<212> PRT
<213> S.epidermidis

<400> 5259
Leu Ile Tyr Tyr Tyr Ser Cys Ser Ser Phe Thr Ile Met Asp Leu Ala
1   5   10   15
Thr Lys Tyr Phe Asn Gln Ile Asn Trp Arg Tyr Val Asp His Ser Ser
            20   25   30
Gly Leu Glu Pro Met Gln Ser Phe Ala Phe Asp Asp Thr Phe Ser Glu
        35   40   45
Ser Val Gly Lys Asp Leu Ser Cys Asn Val Val Arg Thr Trp Ile His
    50   55   60
Gln His Thr Val Ile Leu Gly Ile His Asp Ser Arg Leu Pro Phe Leu
65   70   75   80
Ser Asp Gly Ile Arg Phe Leu Thr Asp Glu Gln Gly Tyr Asn Ala Ile
            85   90   95
Val Arg Asn Ser Gly Gly Leu Gly Val Val Leu Asp Gln Gly Ile Leu
            100   105   110
Asn Ile Ser Leu Ile Phe Lys Gly Gln Thr Glu Thr Thr Ile Asp Glu
        115   120   125
Ala Phe Thr Val Met Tyr Leu Leu Ile Asn Lys Met Phe Glu Asp Glu
    130   135   140
Asp Val Ser Ile Asp Thr Lys Glu Ile Glu Gln Ser Tyr Cys Pro Gly
145   150   155   160
Lys Phe Asp Leu Ser Ile Asn Asp Lys Lys Phe Ala Gly Ile Ser Gln
                165   170   175
Arg Arg Val Arg Gly Gly Ile Ala Val Gln Ile Tyr Leu Cys Ile Glu

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                180                     185                     190
Gly Ser Gly Ser Glu Arg Ala Leu Met Met Gln Gln Phe Tyr Gln Arg
        195                     200                     205
Ala Leu Lys Gly Glu Thr Thr Lys Phe His Tyr Pro Asp Ile Asp Pro
        210                     215                     220
Ser Cys Met Ala Ser Leu Glu Thr Leu Leu Asn Arg Glu Ile Lys Val
225                     230                     235                     240
Gln Asp Val Met Phe Leu Leu Leu Tyr Ala Leu Lys Asp Leu Gly Ala
                245                     250                     255
Asn Leu Asn Met Asp Pro Ile Thr Glu Asp Glu Trp Thr Arg Tyr Glu
                260                     265                     270
Gly Tyr Tyr Asp Lys Met Leu Glu Arg Asn Ala Lys Met Asn Glu Lys
                275                     280                     285
Leu Asp Phe
        290


<210> 5260
<211> 256
<212> PRT
<213> S.epidermidis


<400> 5260
His Glu Tyr Tyr Cys Asn Arg Val Thr Glu Arg Ser Glu Ile Met Ala
1                   5                   10                      15
Val Phe Arg Val Tyr Lys Glu Thr Gly Asn Phe Val Thr Val His Lys
                20                      25                      30
Asn Phe Ile His Asp Asp Asn Leu Ser Trp Lys Ala Lys Gly Ile Leu
        35                      40                      45
Leu Tyr Leu Leu Ser Arg Pro Asp Asp Trp Gln Ile Tyr Glu Ser Glu
        50                      55                      60
Leu Val Arg His Ser Thr Asp Gly Leu Ser Gly Leu Lys Thr Gly Ile
65                      70                      75                      80
Lys Glu Leu Glu Lys Val Gly Tyr Ile Gln Arg Thr Arg Lys Arg Asp
                85                      90                      95
Asp Lys Gly Arg Leu Lys Glu Tyr Glu Tyr Ala Val Tyr Glu Lys Pro
                100                     105                     110
Asn His Ile Arg Phe Ser Asn Val Gly Lys Thr Tyr Ile Gly Lys Thr
        115                     120                     125
Tyr Val Gly Glu Ser His Thr Thr Asn Asn Asn Ser Thr Asn Asn Asp
        130                     135                     140
Leu Thr Asn Asn Lys Asn Thr Asn Asn Val Thr Asp Glu Thr Ser Lys
145                     150                     155                     160
Ser Phe Gln Tyr Ile Ser Asn Asn Leu Glu Ile Ile Gln Ser Pro Leu
                165                     170                     175
Lys Ala Gln Gln Leu Glu Glu Ala Ile Lys Asp Phe Lys Asp Asn Lys
                180                     185                     190
Leu Glu Ile Val Thr Val Ala Thr Asp Tyr Cys Lys Glu Asn Asn Lys
        195                     200                     205
Gly Ile Asn Tyr Leu Ile Lys Val Leu Glu Asn Trp Ser Lys Asp Gly
        210                     215                     220
Val Asp Thr Lys Glu Lys Ala Ile Ser Lys Val Lys Pro Arg Asn Asn
225                     230                     235                     240
Lys Glu Asp Asn Tyr Leu Ala Lys Lys Lys Gln Glu Leu Leu Gly Gly
                245                     250                     255


<210> 5261
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<211> 274
<212> PRT
<213> S.epidermidis

<400> 5261
Asn Leu Tyr Tyr Asn Tyr Asn Asn Asp Leu Phe Leu Ile Leu Lys Lys
1   5   10   15
Phe Gly Asp Glu Met Asn Lys Asp Thr Ile Glu Thr Ser Arg Glu Ala
            20   25   30
Leu Ile Lys Asp Val Val Met Ile Ala Ala Arg Ile Leu Leu Glu Ser
        35   40   45
Gly Ala Glu Gly Thr Arg Val Glu Asp Thr Met Ala Arg Ile Ala Thr
    50   55   60
Lys Leu Gly Tyr Pro Glu Ser Asn Ser Phe Val Thr Asn Thr Val Ile
65   70   75   80
Glu Phe Val Leu His Asn Glu Ala Tyr Pro Arg Leu Tyr Arg Ile Lys
                85   90   95
Thr Arg Asp Thr Asn Leu Ile Lys Ile Ser Gln Ala Asn Glu Ile Ser
                100   105   110
Arg Gln Ile Thr Asn Gly Thr Met Thr Leu Glu Glu Ala Lys Tyr Gln
            115   120   125
Leu Glu Glu Ile Tyr Val Ala Lys Arg Asp Ser Ser Leu Pro Phe Lys
    130   135   140
Gly Ile Ala Ala Ala Ile Ile Ala Thr Ser Phe Leu Tyr Leu Gln Gly
145   150   155   160
Gly Arg Leu Val Asp Ile Ile Thr Ala Val Leu Ala Gly Thr Ile Gly
                165   170   175
Tyr Leu Val Val Glu Ile Leu Asp Arg Lys Leu His Ala Gln Phe Ile
                180   185   190
Pro Glu Phe Ile Gly Ser Leu Val Ile Gly Ile Ile Ser Val Ile Gly
            195   200   205
His Ala Phe Val Pro Ser Gly Asp Leu Ala Thr Ile Ile Ile Ala Ala
    210   215   220
Val Met Pro Ile Val Pro Gly Val Leu Ile Thr Asn Ala Ile Gln Asp
225   230   235   240
Leu Phe Gly Gly His Met Leu Met Phe Thr Thr Lys Ser Leu Glu Ala
                245   250   255
Leu Val Thr Ala Phe Gly Ile Gly Ala Gly Val Ser Ser Ile Leu Ile
                260   265   270
Leu Val

<210> 5262
<211> 501
<212> PRT
<213> S.epidermidis

<400> 5262
Ile Met Tyr Tyr Phe Val Gly Asn Asn Ile Gly His Lys Thr Ala Gly
1   5   10   15
Ile Glu Lys Ala Met Ile Asn Arg Leu Asn Leu Phe Lys Ala Tyr His
            20   25   30
Tyr Gln Ala Lys Ile Leu Leu Leu Ala Trp Asn Arg Tyr Leu Thr Gln
        35   40   45
Thr Ala Ser Gln Tyr Ile Asn Ser Glu Asp Tyr Ile Asn Met Tyr Asp
    50   55   60

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Tyr Phe Gln Glu Ala Ser Asn Val Thr Ser Val Phe Ser Lys Asn Trp
65                  70                  75                      80
Ile His Tyr Trp Arg Asn Glu Cys Gly Tyr Thr Ile Lys Pro Val Ser
                85                  90                  95
Glu Thr Asn Asp Val Arg Ile Tyr Asp Gln Gln Phe Ile Met Tyr
            100                 105                 110
Ala His Phe Ala Asp Glu Ala Tyr Gln Lys Ile Asp Tyr Ile Asn Tyr
        115                 120                 125
Phe Asp Thr Ser Arg Arg Lys Ile Lys Arg Glu Leu Tyr Asp Thr Arg
    130                 135                 140
Gly Phe Leu Ser Cys Val Arg Val Leu Ser Thr Asp Gln Lys Ile Gln
145                 150                 155                 160
Ala Glu Tyr Tyr Leu Ser Pro Gln Gly Asn Val Lys Ile Glu Lys Tyr
                165                 170                 175
Tyr Asp Ile Asn Ser Asn His Pro Tyr Val Ala Lys Lys Ile Ile Leu
            180                 185                 190
Asn His Leu Gly Lys Thr His Phe Leu Asn Asn Glu Thr Glu Leu Gly
        195                 200                 205
Ala Phe Phe Ile Glu Thr Ile Tyr Gln Ser Ser Asp Leu Phe Phe Ser
    210                 215                 220
Asp Arg Asn Leu Val Thr Ser His Ile Phe Asn Ile Val Ala Ser Tyr
225                 230                 235                 240
Ile Pro Val Ile Ala Val Leu His Ser Thr His Val Lys Asp Val Thr
                245                 250                 255
Asp Leu Thr His Ser Pro Ile Lys Asn Val Tyr Lys Gly Val Phe Glu
            260                 265                 270
His Leu Gln Arg Tyr Lys Ala Ile Ile Val Ser Thr Gln Gln Gln Lys
        275                 280                 285
Ala Asp Val Ile Glu Arg Ile Arg Gly Val Ile Pro Val Tyr Ala Ile
    290                 295                 300
Pro Val Gly Tyr Ser Ser Phe Glu Met Asn Asp Asp Ser Asn Lys Asn
305                 310                 315                 320
Asn Tyr Val Ser Pro Lys Lys Ile Ile Ser Val Ala Arg Tyr Ser Pro
                325                 330                 335
Glu Lys Gln Leu Ile Gln Gln Ile Glu Leu Ile Asn Arg Leu Lys Asp
            340                 345                 350
Thr Phe Pro Asn Ile Glu Leu His Met Tyr Gly Phe Gly Lys Glu Glu
            355                 360                 365
Gln His Leu Lys Glu Arg Ile Gln Glu Leu Gly Leu Glu Lys His Val
    370                 375                 380
Ile Leu Arg Gly Phe Leu Lys Asp Leu Thr Asp Glu Tyr Gln Asp Ala
385                 390                 395                 400
Tyr Leu Asn Leu Ile Thr Ser Asn Met Glu Gly Phe Ser Leu Ala Leu
                405                 410                 415
Leu Glu Cys Glu Ser His Gly Val Pro Ser Ile Ser Tyr Asp Ile Gln
            420                 425                 430
Tyr Gly Pro Gly Glu Leu Ile Gln Asp Gly Lys Asn Gly Tyr Leu Ile
        435                 440                 445
Glu Lys Asn Asn Gln His Met Leu Phe Glu Lys Val Lys Leu Leu Leu
        450                 455                 460
Asn Asn Pro Gln Leu Gln Gln Ser Phe Ser His His Cys Ile Glu Thr
465                 470                 475                 480
Ala Gln Lys Tyr Ser Gln Thr Gln Ile Met Leu Leu Trp Lys Asn Leu
                485                 490                 495
Leu Gln His Phe Asn
            500
```

<210> 5263
<211> 72
<212> PRT
<213> S.epidermidis

<400> 5263
Val Met Leu Tyr Ser Leu Tyr Ile Arg His Pro Val Asn Leu Val Tyr
1   5   10   15
Trp Tyr Leu Leu Asn Tyr Thr Lys Arg Pro Tyr Phe Leu Lys Tyr Phe
            20   25   30
Asn Ile Lys Leu His Ile Ser Thr Lys Tyr Phe Gly Glu Thr Leu Glu
        35   40   45
Gly Thr Gly Gln Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys
    50   55   60
Ala Ser Gln Gln Tyr Glu Ala Leu
65   70

<210> 5264
<211> 331
<212> PRT
<213> S.epidermidis

<400> 5264
Ile Ile Leu Tyr Asn Thr Leu Asn Ala Trp Gly Gly Phe Ile Ile Met
1   5   10   15
Lys Tyr Ile Asp Glu Gln Thr Gln Ala Gln Leu Leu Asp Met Asn Glu
            20   25   30
Val Ile Leu Glu Val Glu Lys Ala Leu Gln Ala Phe Ser Glu Asn Lys
        35   40   45
Thr Ile Thr Pro Leu Arg Tyr Val Leu Pro Phe Asn Glu Gln Asn Arg
    50   55   60
Tyr Leu Val Met Pro Ala Leu Ser Asp Glu Leu Asn Ile Val Gly Leu
65   70   75   80
Lys Thr Val Ser Phe Ala Pro Glu Asn Ser Lys Lys Gly Lys Ala Thr
            85   90   95
Ile Thr Gly Ser Val Ile Leu Ser Asp Tyr Glu Thr Gly Glu Thr Leu
            100   105   110
Ser Ile Leu Asp Gly Gly Phe Leu Thr Lys Val Arg Thr Gly Ala Ile
        115   120   125
Ser Gly Val Ala Thr Lys Tyr Leu Ala Lys Glu Asn Ala Lys Thr Leu
    130   135   140
Ser Val Ile Gly Ala Gly Val Gln Ala Glu Gly Leu Ile Glu Ala Ile
145   150   155   160
Leu Ala Val Arg Asp Ile Glu Lys Ile His Ile Ala Ser Arg Thr Phe
                165   170   175
Glu Lys Ala Glu Lys Phe Ala Gln Asn Ile Arg Asn Arg Phe Asn Ile
            180   185   190
Lys Val Ser Val Phe Arg Ser Ala Asp Glu Ala Ile Asp Ser Ala Asp
        195   200   205
Ile Val Val Thr Ala Thr Asn Ala Asn Gln Pro Val Tyr Thr His Ser
    210   215   220
Leu His Pro Gly Val His Leu Asn Ala Val Gly Ser Phe Lys Pro Asp
225   230   235   240
Met Gln Glu Ile Pro Ser Glu Thr Met Leu Val Ala Asn Lys Ile Val
                245   250   255

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Val Glu Ser Met Glu Ala Ala Leu Glu Glu Thr Gly Asp Leu Lys Ile
            260                 265                 270
Pro Gln Ala Glu Gly Ile Leu Thr Lys Asn Met Leu His Ser Glu Leu
            275                 280                 285
Gly Asp Ile Ile Ser Gly Glu Lys Val Gly Arg Glu Thr Glu Glu Glu
            290                 295                 300
Val Thr Val Phe Lys Ser Val Gly Leu Ala Ile Val Asp Ile Ile Val
305                 310                 315                 320
Ala Gln Tyr Phe Tyr Lys Lys Leu Ile Gln Ser
                325                 330
```

<210> 5265
<211> 127
<212> PRT
<213> S.epidermidis

<400> 5265
```
Trp Arg Lys Tyr Lys Met Ala Asn Gln Glu Gln Ile Ile Glu Ala Ile
1               5                   10                  15
Lys Glu Met Ser Val Leu Glu Leu Asn Asp Leu Val Lys Ala Ile Glu
            20                  25                  30
Glu Glu Phe Gly Val Thr Ala Ala Ala Pro Val Ala Ala Ala Gly Ala
            35                  40                  45
Ala Gly Gly Gly Asn Ala Ala Ala Glu Lys Thr Glu Phe Asp Val Glu
    50                  55                  60
Leu Thr Ser Ala Gly Ser Ser Lys Ile Lys Val Val Lys Ala Val Lys
65                  70                  75                  80
Glu Ala Thr Gly Leu Gly Leu Lys Asp Ala Lys Glu Leu Val Asp Gly
            85                  90                  95
Ala Pro Lys Val Ile Lys Glu Ala Met Pro Lys Glu Asp Ala Glu Lys
            100                 105                 110
Leu Lys Glu Gln Leu Glu Glu Val Gly Ala Ser Val Glu Leu Lys
        115                 120                 125
```

<210> 5266
<211> 135
<212> PRT
<213> S.epidermidis

<400> 5266
```
Tyr Leu Val Tyr Ser Lys Ala Ser Ile Leu Asn Met Ile Asp Gly Tyr
1               5                   10                  15
Lys Met Asn Cys Asn Ile Leu Glu Asp Val Val Pro Glu Cys Asp Ser
            20                  25                  30
Asn Ser Ile Ala Gln Tyr Gly Ile Gln Ala Thr Leu Pro Lys Pro Gln
            35                  40                  45
Gly Glu Asn Gly Ser Lys Val Glu Asp Val Val Ile Arg Leu Glu Arg
    50                  55                  60
Thr Asn Lys Arg Tyr Ala Gln Met Leu Lys Glu Val Glu Phe Ile Asn
65                  70                  75                  80
Gln Ser Gln Gln Lys Leu Gly His Val Asp Phe Cys Phe Leu Glu His
            85                  90                  95
Leu Lys Lys Gly Arg Arg Arg Asp Lys Ile Ile Glu Lys Met Pro Asn
            100                 105                 110
Ala Lys Leu Asn Arg Asn Asn Phe Leu Ala Arg Lys Asp Glu Leu Ala
        115                 120                 125
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Glu Lys Ile Tyr Leu Leu Gln
    130   135

<210> 5267
<211> 823
<212> PRT
<213> S.epidermidis

<400> 5267
Asn Arg Arg Tyr Leu Tyr Met Leu Phe Gly Arg Leu Thr Glu Arg Ala
1   5   10   15
Gln Arg Val Leu Ala His Ala Gln Glu Glu Ala Ile Arg Leu Asn His
            20   25   30
Ser Asn Ile Gly Thr Glu His Leu Leu Leu Gly Leu Met Lys Glu Pro
            35   40   45
Glu Gly Ile Ala Ala Lys Val Leu Glu Ser Phe Asn Ile Thr Glu Asp
        50   55   60
Lys Val Ile Glu Glu Val Glu Lys Leu Ile Gly His Gly Gln Glu Gln
65   70   75   80
Met Gly Thr Leu His Tyr Thr Pro Arg Ala Lys Lys Val Ile Glu Leu
                85   90   95
Ser Met Asp Glu Ala Arg Lys Leu His His Asn Phe Val Gly Thr Glu
            100   105   110
His Ile Leu Leu Gly Leu Ile Arg Glu Asn Glu Gly Val Ala Ala Arg
            115   120   125
Val Phe Ala Asn Leu Asp Leu Asn Ile Thr Lys Ala Arg Ala Gln Val
            130   135   140
Val Lys Ala Leu Gly Ser Pro Glu Met Ser Asn Lys Asn Ala Gln Ala
145   150   155   160
Asn Lys Ser Asn Asn Thr Pro Thr Leu Asp Gly Leu Ala Arg Asp Leu
                165   170   175
Thr Val Ile Ala Lys Asp Gly Thr Leu Asp Pro Val Val Gly Arg Asp
                180   185   190
Lys Glu Ile Thr Arg Val Ile Glu Val Leu Ser Arg Arg Thr Lys Asn
            195   200   205
Asn Pro Val Leu Ile Gly Glu Pro Gly Val Gly Lys Thr Ala Ile Ala
            210   215   220
Glu Gly Leu Ala Gln Ala Ile Val Lys Asn Glu Val Pro Glu Thr Leu
225   230   235   240
Lys Asp Lys Arg Val Met Ser Leu Asp Met Gly Thr Val Val Ala Gly
                245   250   255
Thr Lys Tyr Arg Gly Glu Phe Glu Glu Arg Leu Lys Lys Val Met Glu
            260   265   270
Glu Ile His Gln Ala Gly Asn Val Ile Leu Phe Ile Asp Glu Leu His
            275   280   285
Thr Leu Val Gly Ala Gly Gly Ala Glu Gly Ala Ile Asp Ala Ser Asn
            290   295   300
Ile Leu Lys Pro Ala Leu Ala Arg Gly Glu Leu Gln Cys Ile Gly Ala
305   310   315   320
Thr Thr Leu Asp Glu Tyr Arg Lys Asn Ile Glu Lys Asp Ala Ala Leu
                325   330   335
Glu Arg Arg Phe Gln Pro Ile Gln Val Asp Glu Pro Thr Val Glu Asp
                340   345   350
Thr Ile Glu Ile Leu Lys Gly Leu Arg Asp Arg Tyr Glu Ala His His
            355   360   365
Arg Ile Asn Ile Ser Asp Glu Ala Leu Glu Ala Ala Ala Lys Leu Ser

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     370                     375                     380
Asp Arg Tyr Val Ser Asp Arg Phe Leu Pro Asp Lys Ala Ile Asp Leu
385                     390                     395                     400
Ile Asp Glu Ala Ser Ser Lys Val Arg Leu Lys Ser His Thr Thr Pro
                405                     410                     415
Ser Asn Leu Lys Glu Ile Glu Gln Glu Ile Asp Lys Val Lys Asn Glu
                420                     425                     430
Lys Asp Ala Ala Val His Ala Gln Glu Phe Glu Asn Ala Ala Asn Leu
            435                     440                     445
Arg Asp Lys Gln Ser Lys Leu Glu Lys Gln Tyr Glu Asp Ala Lys Asn
            450                     455                     460
Glu Trp Lys Asn Ala Gln Gly Gly Leu Asp Thr Ala Leu Ser Glu Glu
465                     470                     475                     480
Asn Ile Ala Glu Val Ile Ala Gly Trp Thr Gly Ile Pro Leu Thr Lys
                485                     490                     495
Ile Asn Glu Thr Glu Ser Asp Arg Leu Leu Asn Leu Glu Asp Thr Leu
                500                     505                     510
His Lys Arg Val Ile Gly Gln Asn Asp Ala Val Asn Ser Ile Ser Lys
            515                     520                     525
Ala Val Arg Arg Ala Arg Ala Gly Leu Lys Asp Pro Lys Arg Pro Ile
            530                     535                     540
Gly Ser Phe Ile Phe Leu Gly Pro Thr Gly Val Gly Lys Thr Glu Leu
545                     550                     555                     560
Ala Arg Ala Leu Ala Glu Ser Met Phe Gly Glu Asp Asp Ala Met Ile
                565                     570                     575
Arg Val Asp Met Ser Glu Phe Met Glu Lys His Ala Val Ser Arg Leu
                580                     585                     590
Val Gly Ala Pro Pro Gly Tyr Val Gly His Asp Asp Gly Gly Gln Leu
            595                     600                     605
Thr Glu Lys Val Arg Arg Lys Pro Tyr Ser Val Ile Leu Phe Asp Glu
            610                     615                     620
Ile Glu Lys Ala His Pro Asp Val Phe Asn Ile Leu Leu Gln Val Leu
625                     630                     635                     640
Asp Asp Gly His Leu Thr Asp Thr Lys Gly Arg Thr Val Asp Phe Arg
                645                     650                     655
Asn Thr Val Ile Ile Met Thr Ser Asn Val Gly Ala Gln Glu Leu Gln
                660                     665                     670
Asp Gln Arg Phe Ala Gly Phe Gly Gly Ala Ser Glu Gly Ser Asp Tyr
            675                     680                     685
Glu Thr Val Arg Lys Thr Met Met Lys Glu Leu Lys Asn Ser Phe Arg
            690                     695                     700
Pro Glu Phe Leu Asn Arg Val Asp Asp Ile Ile Val Phe His Lys Leu
705                     710                     715                     720
Thr Lys Asp Glu Leu Lys Glu Ile Val Thr Met Met Val Asn Lys Leu
                725                     730                     735
Thr His Arg Leu Ser Glu Gln Asn Ile Asn Ile Val Val Thr Asp Lys
                740                     745                     750
Ala Lys Glu Lys Ile Ala Glu Glu Gly Tyr Asp Pro Glu Tyr Gly Ala
            755                     760                     765
Arg Pro Leu Ile Arg Ala Ile Gln Lys Thr Val Glu Asp Asn Leu Ser
            770                     775                     780
Glu Leu Ile Leu Asp Gly Asn Lys Ile Glu Gly Lys Glu Val Thr Ile
785                     790                     795                     800
Asp His Asp Gly Lys Glu Phe Lys Tyr Asp Ile His Glu Ile Thr Ala
                805                     810                     815
Lys Lys Glu Thr Thr Glu Ser
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820

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<210> 5268
<211> 58
<212> PRT
<213> S.epidermidis

<400> 5268
Met Lys Tyr Leu Leu Ser Tyr Met Ser Met Phe Ile Ala Met Ile Ile
1               5                   10                  15
Thr Leu Ile Leu Gly Gly Gly Phe Phe Thr Val Ile Ala Phe Ser Met
            20                  25                  30
Leu Thr Leu Ile Phe Ser Thr Phe Phe Trp Glu Lys Trp Ile Glu Ile
        35                  40                  45
Thr Lys Lys Thr Glu Thr Cys Ala Asn Lys
    50                  55


<210> 5269
<211> 171
<212> PRT
<213> S.epidermidis

<400> 5269
Trp Phe Phe Gln Thr Lys Ile Thr Ser Ile Leu Asp Ala Asn Glu His
1               5                   10                  15
Ser Thr Val Tyr Gly Lys Arg Gly Arg Glu Arg Val Tyr Glu Glu Arg
            20                  25                  30
Tyr Arg Val His Glu Glu Gln Leu Gln Arg Asn His Gly Arg Ala Thr
        35                  40                  45
Leu Leu Asp Tyr Ser Glu Ile Arg Gln Ile Thr Ser Gln Tyr Ile Gly
    50                  55                  60
Tyr Leu Pro Tyr Asp Glu Leu Met Ser Leu Thr Pro Asn Glu Trp Lys
65                  70                  75                  80
Asp Trp Val Ile Gly Arg Arg Leu Ala Leu Leu Asp Glu Gln Glu Thr
                85                  90                  95
Leu Leu Phe Gly Ala Gln Ala Asn Gly Leu Val Gln Ala Gly Lys Ser
            100                 105                 110
Leu Lys Arg Leu Gln Lys Gln Leu Glu Arg Ala Arg Tyr Glu Val Arg
        115                 120                 125
Gly Gln Ser Asp Glu Tyr Glu Arg Met Lys Lys Arg Lys Leu Ala Gln
    130                 135                 140
Asn Lys Arg Asn Arg Glu Ala Gln Lys Gln Gly Thr Arg Arg Phe Met
145                 150                 155                 160
Asn Ser Leu Arg Asn Thr Ser Gln Arg Gly Gly
                165                 170


<210> 5270
<211> 154
<212> PRT
<213> S.epidermidis

<400> 5270
Glu Cys Thr His Met Phe Trp Ile Phe Asn Phe Ile Phe Ser Phe Leu
1               5                   10                  15
Ala Ser Leu Phe Phe Cys Val Ile Phe Asp Ala Pro Arg Lys Leu Tyr
            20                  25                  30
```

```
Phe Ala Cys Gly Phe Val Gly Ala Cys Gly Trp Met Val Tyr Thr Val
        35                  40                  45
Leu Phe Asn Gly Phe Glu Leu His Thr Ile Tyr Ser Ser Phe Phe Gly
        50                  55                  60
Ser Leu Ala Leu Gly Leu Leu Ser His Tyr Met Ala Arg Arg Lys Lys
65                  70                  75                  80
Glu Pro Val Ile Ile Phe Met Val Thr Gly Ile Ile Pro Leu Val Pro
                85                  90                  95
Gly Gly Leu Ala Tyr Asp Ala Thr Lys Asn Leu Val Leu Leu His Phe
            100                 105                 110
Gly Lys Ala Ile Asn Thr Met Leu Glu Val Thr Leu Ile Ala Gly Ala
            115                 120                 125
Ile Ala Leu Gly Leu Leu Phe Ala Asp Gln Ile Ser Lys Ile Val Ile
        130                 135                 140
Ser Gly Phe Ala Arg Thr Arg Lys Arg Leu
145                 150
```

```
<210> 5271
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5271
Ile Ser Thr His Lys Thr Asp Val Phe Tyr Val Leu Leu Lys Glu Lys
1               5                   10                  15
Gly Arg Arg Arg Ala Asn Arg Leu Thr His Leu Arg Leu Thr Gln Phe
            20                  25                  30
Lys Asn Phe Ile Phe Arg Ile Ala Leu
        35                  40
```

```
<210> 5272
<211> 162
<212> PRT
<213> S.epidermidis

<400> 5272
Gly Arg Ser His Met Tyr Ser Val Arg Gln Ala Thr Glu Lys Asp Val
1               5                   10                  15
Val Ala Ile Arg Asp Val Ala Thr Lys Ala Trp Tyr Asn Thr Tyr Leu
            20                  25                  30
Asn Ile Tyr Ala Ala Ser Thr Val Asn Glu Leu Leu Ala Ala Ser Tyr
            35                  40                  45
Asn Glu Thr His Leu Lys Lys Arg Leu Asn Glu Gln Leu Phe Leu Val
        50                  55                  60
Ala Glu Glu Asp Ser Glu Ile Val Gly Phe Ala Asn Phe Ile Tyr Gly
65                  70                  75                  80
Glu Glu Leu Tyr Leu Ser Ala His Tyr Val Arg Pro Glu Ser Gln His
                85                  90                  95
Arg Gly Tyr Gly Thr Arg Leu Leu Glu Ala Gly Leu Lys Arg Phe Lys
            100                 105                 110
Asp Gln Tyr Glu Thr Val Tyr Leu Glu Val Asp Asn Asn Asn Ser Asn
            115                 120                 125
Gly Ile Glu Tyr Tyr Gln Asn His Gly Phe Glu Ile Ile Arg Ser Tyr
        130                 135                 140
Gln Pro Glu Met Tyr Gly Glu Ile Met Asp Leu Ala Leu Met Lys Lys
145                 150                 155                 160
```

Ser Phe

<210> 5273
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5273
Val Lys Tyr His Val Phe Thr Ser Val Arg Ser Leu Leu Arg Thr Val
1   5   10   15
Tyr Asn Leu Thr Phe Phe Val Pro Val Ser Gln His Phe Ser Leu Gln
            20   25   30
Lys Ile Gln Lys Asp Phe Phe Tyr Leu Tyr Ile Val Phe Ile Trp Glu
        35   40   45
Arg

<210> 5274
<211> 130
<212> PRT
<213> S.epidermidis

<400> 5274
Tyr Val Asn Gln Gly Lys Ser Lys Thr Lys Gln Ser Asp Ser Pro Ala
1   5   10   15
Leu Asn Arg Gly Phe Asn Ser Lys Lys Gln Phe Thr Asn Leu Asn
            20   25   30
Ser Pro Gln Lys Arg Gly Val Cys Thr Arg Val Gly Thr Met Thr Pro
        35   40   45
Lys Lys Pro Asn Ser Ala Leu Arg Lys Tyr Ala Arg Val Arg Leu Ser
        50   55   60
Asn Asn Ile Glu Val Asn Ala Tyr Ile Pro Gly Ile Gly His Asn Leu
65   70   75   80
Gln Glu His Ser Val Val Leu Val Arg Gly Gly Arg Val Lys Asp Leu
                85   90   95
Pro Gly Val Arg Tyr His Ile Val Arg Gly Ala Leu Asp Thr Ser Gly
            100   105   110
Val Asp Gly Arg Arg Gln Gly Arg Ser Leu Tyr Gly Thr Lys Lys Pro
            115   120   125
Lys Asn
        130

<210> 5275
<211> 57
<212> PRT
<213> S.epidermidis

<400> 5275
His Glu Arg Leu Pro Leu Ser Leu Ile Lys Leu Ile Ser Thr Arg Leu
1   5   10   15
Asn His Tyr Ala Glu Tyr His Arg Tyr His Lys Phe Lys Asn Met Lys
            20   25   30
Arg Ala Pro Leu Thr Phe Val Ala Arg Gly Ala Leu Ala Arg Phe His
        35   40   45
Ser Ser Phe Asn Ser Asn Thr His Ile

50   55

<210> 5276
<211> 312
<212> PRT
<213> S.epidermidis

<400> 5276
Leu Ile Leu His Asp Val Glu Val Tyr Lys Asn Lys Glu Arg Leu Arg
1   5   10   15
Ile Ser Asn Asn Arg Phe Thr Gly Thr Ala Leu Arg Val Val Ser Tyr
            20   25   30
Asp Val Lys Gly Ala Gly Tyr Asp Arg Lys Phe Asp Glu Ile Asp Arg
        35   40   45
Val Asn Gly Arg Phe His Asn Ala Thr Lys Glu Glu Lys Lys Ser Ile
        50   55   60
Ser Met Thr Val Arg Tyr Asp Val Glu Lys Ile Ala Tyr Ala Ser His
65   70   75   80
Leu Lys Ala Asn Ile Gln Ala Met Leu Arg Gly His Phe Tyr Leu Arg
            85   90   95
Glu Leu Ala Thr Ser Glu Ser Glu Val Lys Phe Glu Asn Ile Phe Glu
            100   105   110
Pro Lys Glu Gln Ser Phe Glu Leu Glu Tyr Val Asp Gly Arg Gln Ile
        115   120   125
Leu Val Gly Leu Val Asn Glu Val Ser Phe Asp Thr Thr Lys Thr Ser
        130   135   140
Gly Glu Phe Thr Leu Asp Phe Glu Thr Ile Glu Leu Pro Tyr Phe Glu
145   150   155   160
Ser Ile Gly Tyr Ser Thr Asp Leu Glu Lys Glu Ser Gly Asn Leu Asn
                165   170   175
Lys Trp Gly Ile Pro Asp Lys Asn Pro Phe Asn Thr Ser His Lys Glu
            180   185   190
Arg Arg Tyr Thr Phe Tyr Asp Thr Lys Val Gly Asp Val Tyr Tyr Gly
            195   200   205
Gly Thr Ala Glu Ile Asn Gln Phe Asn Gln Asp Ser Val Val Glu Met
        210   215   .220
Thr Leu Gly Glu Asn Val Ser Lys Asn Asp Ser Asp Gly Phe Asn Phe
225   230   235   240
Tyr Met Thr His Ser Asp Ile Met Lys Ile Ser Gly Leu Glu Leu Arg
                245   250   255
Ala Gly Asp Val Ile Lys Phe Asp Gly Ile His Val Tyr Arg Asn Asn
            260   265   270
Leu Arg Ile Asp Asp Tyr Asn Lys Thr Lys Gln Gln Pro Val Leu Met
            275   280   285
Pro Gly Trp Asn Thr Phe His Thr Thr Lys Lys Leu Gln Lys Ile Thr
            290   295   300
Phe Lys His Lys Arg Tyr Tyr Leu
305   310

<210> 5277
<211> 277
<212> PRT
<213> S.epidermidis

<400> 5277
His Met Ala Gln Gly Thr Thr Thr Lys Ser Thr Gln Ile Val Pro Glu

```
1                       5                           10                          15
Val Leu Lys Pro Met Met Gln Ala Glu Leu Asp Lys Lys Leu Arg Phe
            20                      25                      30
Ala Gln Phe Ala Asp Ile Asp Ser Thr Leu Val Gly Gln Pro Gly Asp
            35                      40                      45
Thr Leu Thr Phe Pro Ala Phe Val Tyr Ser Gly Asp Ala Thr Val Val
            50                      55                      60
Pro Glu Gly Gln Lys Ile Pro Val Asp Lys Ile Glu Thr Asn Arg Arg
65                      70                      75                      80
Glu Ala Lys Ile His Lys Ile Gly Lys Gly Thr Asp Ile Thr Asp Glu
                    85                      90                      95
Ala Leu Leu Ser Gly Tyr Gly Asp Pro Gln Gly Glu Ala Val Arg Gln
            100                     105                     110
His Gly Leu Ala Ile Ala Asn Lys Val Asp Asn Asp Val Leu Glu Ala
            115                     120                     125
Leu Arg Gly Thr Lys Leu Thr Val Ser Ala Asp Ile Gly Thr Leu Ala
            130                     135                     140
Gly Leu Glu Ala Ala Ile Asp Thr Phe Asp Asp Glu Asp Leu Glu Pro
145                     150                     155                     160
Met Val Leu Phe Ile Asn Pro Lys Asp Ala Gly Lys Leu Arg Ser Ser
                    165                     170                     175
Ala Ser Ala Asn Phe Thr Arg Ala Thr Glu Leu Gly Asp Asn Ile Ile
            180                     185                     190
Val Lys Gly Ala Phe Gly Glu Ala Leu Gly Ala Val Ile Val Arg Ser
            195             -       200                     205
Lys Lys Leu Asp Glu Gly Glu Ala Ile Leu Ala Lys Arg Gly Ala Val
            210                     215                     220
Lys Leu Ile Thr Lys Arg Asp Phe Phe Leu Glu Thr Asp Arg Asp Pro
225                     230                     235                     240
Ser Thr Lys Thr Thr Ala Leu Tyr Ser Asp Lys His Tyr Val Ala Tyr
                    245                     250                     255
Leu Tyr Asp Glu Ser Lys Ala Val Lys Val Thr Lys Gly Ala Gly Thr
                    260                     265                     270
Thr Asp Ser Gly Ala
            275
```

```
<210> 5278
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5278
Tyr Lys Arg Gln Lys Glu Asn Gly Asn Thr Tyr Asp Asp Thr Ile Phe
1                   5                       10                      15
Asp Phe Tyr Leu His Leu Ile Asn Leu Ser Ile Leu Arg Lys Ser Thr
            20                      25                      30
His Leu Leu Asn Ile Asn Phe Tyr Ile Leu
            35                      40
```

```
<210> 5279
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5279
Gln Glu Arg Gln Lys Lys Leu Tyr Tyr Lys Leu Ile Lys His Lys Lys
```

```
1                   5                   10                  15
Tyr His Cys Ala Ser Ile Tyr Gly Asp Ile Lys Asp Asp Thr Asp Glu
            20                  25                  30
Asn Gly Asn Glu Tyr Lys Ile His Ile Cys Lys Ile Gln
        35                  40                  45
```

<210> 5280
<211> 406
<212> PRT
<213> S.epidermidis

<400> 5280

```
Arg Asn Met His Ile Val Ile Gly Ile Leu Gly Ile Ile Phe Phe Leu
1                   5                   10                  15
Ala Leu Ala Val Leu Phe Ser Ser Asp Arg Lys Asn Ile Arg Trp Arg
            20                  25                  30
Tyr Val Gly Leu Leu Leu Val Ile Gln Leu Ile Phe Ala Phe Ile Leu
        35                  40                  45
Leu Lys Thr Asn Leu Gly Ile Ser Val Ile Gly Ser Ile Ser Asp Gly
        50                  55                  60
Phe Asn Tyr Leu Leu Ala Lys Ala Ala Val Gly Val Asn Phe Val Phe
65                  70                  75                  80
Gly Gly Phe Lys Phe Ile Asp Pro Lys Gln Pro Pro Phe Phe Phe Ser
                85                  90                  95
Val Leu Leu Pro Ile Val Phe Ile Ser Ala Leu Ile Gly Ile Leu Gln
            100                 105                 110
Tyr Thr Arg Ile Leu Pro Leu Ile Ile Asn Leu Leu Gly Phe Leu Ile
            115                 120                 125
Ser Lys Ile Asn Gly Met Gly Arg Leu Glu Ser Tyr Asn Ala Val Ala
        130                 135                 140
Ala Ala Ile Leu Gly Gln Ser Glu Val Phe Ile Ser Leu Lys Lys Gln
145                 150                 155                 160
Leu Pro Tyr Ile Pro Lys Gln Arg Leu Tyr Thr Leu Thr Ala Ser Ala
            165                 170                 175
Met Ser Thr Val Ser Ala Ser Ile Ile Gly Ala Tyr Phe Thr Leu Ile
            180                 185                 190
Glu Pro Lys Tyr Val Val Thr Ala Val Val Leu Asn Leu Phe Gly Gly
            195                 200                 205
Phe Ile Ile Ala Ser Ile Ile Asn Pro Tyr Lys Val Asn Glu Glu Asp
        210                 215                 220
Asp Lys Leu Leu Ile Asp Glu Asn Glu Thr Lys Lys Gln Ser Phe Phe
225                 230                 235                 240
Glu Met Leu Gly Glu Tyr Ile Leu Asp Gly Phe Lys Val Ala Val Ile
            245                 250                 255
Val Gly Ala Met Leu Ile Gly Tyr Ile Ala Ile Ile Ala Leu Leu Asn
            260                 265                 270
Gly Met Val Ser Gly Ile Leu Ser Phe Met Ser Gly Gly Ala Ile Gln
            275                 280                 285
Trp Asn Phe Gln Thr Leu Ile Gly Phe Ile Phe Ala Pro Phe Ala Phe
        290                 295                 300
Leu Thr Gly Ile Pro Trp Gln Asp Ala Val Gln Ser Gly Ser Val Met
305                 310                 315                 320
Ala Thr Lys Leu Leu Ser Asn Glu Phe Val Ala Met Gln Asp Leu Gly
            325                 330                 335
Lys Ala Thr Gly Leu Ser Glu His Ala Lys Gly Ile Thr Ser Val Phe
            340                 345                 350
```

```
Leu Val Ser Phe Ala Asn Phe Ser Ser Ile Gly Ile Ile Ser Gly Ala
        355                     360                 365
Ile Lys Ser Leu Asn Asp Glu Lys Gly Asp Val Val Ala Arg Phe Gly
        370                     375                 380
Ile Lys Leu Leu Phe Gly Ala Thr Leu Val Ser Phe Ile Ser Ala Ala
385                     390                     395                 400
Ile Ala Gly Phe Phe Ile
                    405
```

```
<210> 5281
<211> 246
<212> PRT
<213> S.epidermidis
```

```
<400> 5281
Ile Ser Met Gln Ile Gln Pro Glu Phe Phe Glu Lys Leu Lys Pro Arg
1               5                   10                  15
Tyr Ser Asp Asn Gly Val Phe Gln Leu Ile Asn Thr Ser Ile Leu Asn
        20                  25                  30
Ala Phe Gly Leu Asn Asp Lys Ile Arg Gly Glu Glu Met Ser His Tyr
        35                  40                  45
Tyr Asp Glu Gln Pro Asp Val Lys Ser Asn Pro Lys Arg Ile Ser Tyr
        50                  55                  60
Gln Ile Lys Asn Val Gln Leu Glu Leu Thr Thr Asp Ala Gly Val Phe
65                  70                  75                  80
Ser Lys Asp Asn Val Asp Phe Gly Ser Asp Leu Leu Ile Lys Thr Phe
                85                  90                  95
Leu Lys Glu His Pro Pro Gly Pro Ser Lys Thr Ile Ala Asp Val Gly
        100                 105                 110
Cys Gly Tyr Gly Pro Ile Gly Leu Ala Ile Gly Lys Ala Ser Pro His
        115                 120                 125
His Gln Ile Thr Met Leu Asp Ile Asn Asn Arg Ala Leu Ala Leu Ala
        130                 135                 140
Glu Met Asn Lys Thr Lys Asn Gln Val Asp Asn Val Thr Ile Met Glu
145                 150                 155                 160
Ser Asp Cys Leu Ser Ala Val Asn His Gln Cys Phe Asp Tyr Ile Leu
                165                 170                 175
Thr Asn Pro Pro Ile Arg Ala Gly Lys Asp Ile Val His Arg Ile Phe
            180                 185                 190
Glu Gln Ala Phe Asp Arg Leu Lys Thr Thr Gly Glu Leu Tyr Val Val
        195                 200                 205
Ile Gln Lys Lys Gln Gly Met Pro Ser Ala Lys Lys Lys Ile Glu Glu
        210                 215                 220
Leu Phe Gly Asn Val Glu Ile Ile Ala Lys Ser Lys Gly Tyr Tyr Ile
225                 230                 235                 240
Leu Lys Ser Ile Lys Gly
                245
```

```
<210> 5282
<211> 600
<212> PRT
<213> S.epidermidis
```

```
<400> 5282
Ile Gln Thr Gln Cys Trp Asp Leu Pro Asn Tyr Ile Phe Asn Arg Tyr
1               5                   10                  15
```

Trp His Phe Lys Thr Thr Gly Asn Ala Ile Ala Met Ala Trp Tyr Arg
            20   25   30
Tyr Pro Lys Gly Phe Lys Phe Tyr Arg Asn Thr Arg Asn Phe Val Pro
            35   40   45
Lys Pro Gly Asp Met Ala Val Trp Gly Lys Gly Ser Phe Asn Asn Gly
            50   55   60
Val Gly His Thr Ala Val Val Ile Gly Pro Ser Thr Lys Ser Tyr Phe
65   70   75   80
Thr Ser Val Asp Gln Asn Trp Ile Gly Ala Asn Ser Tyr Thr Gly Ser
                85   90   95
Pro Gly Ala Lys Ile Lys His Ser Tyr Asn Gly Ile Ser Gly Phe Val
            100   105   110
Arg Pro Pro Tyr His Ala Glu Thr Lys Lys Pro Ser Lys Pro Ser Ser
            115   120   125
Thr Pro Ser Lys Pro Ser Asn Asp Asn Thr Pro Lys Asn Thr Lys Glu
            130   135   140
Gln Thr Lys Pro Ile Thr Lys Glu Ile Thr Lys Val Ser Tyr Thr Ser
145   150   155   160
Phe Ala Tyr Asp Leu Asp Asp Asp Leu Glu Tyr Ile Tyr His Tyr Met
                165   170   175
Val Glu Gly Gln Lys Leu Ile Gly Lys Val Lys Gly Ile Tyr Ile Lys
            180   185   190
Glu Ser Thr His Met Arg Ser Val Glu Glu Leu Tyr Leu Gln Arg Asn
            195   200   205
Lys Tyr Val Asn Glu Asp Glu Tyr Pro His Val Tyr Ile Asp Arg Glu
210   215   220
Arg Val Trp Thr Pro Arg Pro Asp Ser Glu Glu Ala Pro Glu His Pro
225   230   235   240
Gly Trp Leu Val Met Glu Val Cys Gly Gly Gln Thr Asp Ser Lys Arg
                245   250   255
Gln Phe Met Leu Asn Gln Ile Arg Ala Leu Ile Tyr Gly Val Trp Leu
                260   265   270
Leu Ser Trp Ser Lys Val Lys Leu Ser Glu Ser Ser Ile Lys Ala Asp
            275   280   285
Pro Asn Ile Trp Arg Ser Met Lys Asp Leu Ile Asn Tyr Asp Leu Ile
            290   295   300
Lys Asn Gly Ile Pro Asp Glu Ser Lys Tyr Lys Glu Val Glu Lys Lys
305   310   315   320
Ile Ile Gly Leu Tyr Leu Lys Arg Asp Lys Leu Leu Thr Glu Thr Ile
                325   330   335
Thr Thr Thr Thr Thr Lys Thr Lys Ile Lys Ile Lys Pro Lys Thr Ser
            340   345   350
Val Asp Asn Pro Ser Gln Asn Asp Lys Ser Thr Gly Lys Thr Thr Asn
            355   360   365
Arg Thr Ser Asn Lys Pro Arg Val Val Val Glu Lys Ser Lys Tyr Thr
            370   375   380
Phe Gln Gln Ala Leu Asn Ala Gln Met Ala His Gly Met Pro Gln Lys
385   390   395   400
Ser Tyr Ser Trp Gly Trp Gly Asn Ala Ser Arg Ser Gln Thr Ser Lys
                405   410   415
Tyr Met Asn Pro Asn Thr Ile Trp Asn Ser Ser Thr Gln Arg Tyr Gln
                420   425   430
Met Leu Asp Leu Gly Lys Tyr Gln Gly Ile Ser Val Ser Lys Leu Asn
            435   440   445
Lys Ile Leu Lys Gly Lys Gly Thr Leu Ser Gly Gln Gly Lys Ala Phe
            450   455   460

```
Ala Asp Gly Cys Lys Lys Tyr Asn Val Asn Glu Ile Tyr Leu Ile Ala
465                 470             475                 480
His Ala Phe Leu Glu Ser Gly Tyr Gly Arg Ser Asn Phe Ala Ser Gly
                485             490             495
Arg Tyr Gly Ile Tyr Asn Tyr Phe Gly Ile Ala Ala Tyr Asp Asn Asn
                500             505             510
Pro Asn Ala Ser Ile Gly Tyr Ala Arg Arg Gln Gly Trp Thr Ser Pro
                515             520             525
Arg Asn Gly Ile Ile Gly Gly Ala Lys Phe Val Arg Lys Gln Tyr Phe
                530             535             540
Asn Lys Gly Lys Asn Thr Leu Tyr Arg Met Arg Trp Asn Pro Ser Asn
545                 550             555                 560
Pro Gly Arg Met Gln Tyr Ala Thr Ala Ile Glu Trp Cys Asn Phe Gln
                565             570             575
Ala Ser Thr Ile Ser Lys Leu Tyr Lys Thr Val Gly Thr Lys Gly Met
                580             585             590
Tyr Tyr Ile Arg Asp Lys Tyr Arg
                595             600


<210> 5283
<211> 180
<212> PRT
<213> S.epidermidis

<400> 5283
Arg Met Ala Gln Asn Lys Tyr Ile Ala Ala Leu Gln Ile Ala Asp Lys
1               5               10              15
Asp Leu Ala Ser Lys Leu Lys Glu Glu Asp Ala Ile Leu Leu Ala Ser
                20              25              30
Leu Ala Glu Gly Gly His Thr Ile Ser Asn Asp Leu Ala Glu Met Ile
                35              40              45
Thr Gly Gly Lys Lys Asp Tyr Gly Arg Asn Ser Val Glu Glu Glu Ile
                50              55              60
Lys Leu Thr Val Asp Arg Val Pro Gly Asp Lys Gly Gln Glu Ala Leu
65              70              75              80
Lys Glu Ser Val Lys Asn Phe Lys Gln Leu Arg Leu Trp Ile Trp Glu
                85              90              95
Val Lys Lys Arg Asp Gly Lys His His Gly Thr Phe Ala Tyr Val Ile
                100             105             110
Ile Glu Glu Gln Glu Trp Ser Phe Asp Asp Glu Asp Asp Lys Ile Glu
                115             120             125
Ile Thr Ala Lys Val Lys Phe Asn Ser Ala Asp Gly Ser Val Asp Ser
                130             135             140
Leu Pro Pro Glu Trp Leu Asn Pro Ser Ala Ala Ala Pro Thr Val Glu
145                 150             155                 160
Phe Glu Gly Met Gly Glu Tyr Thr Gly Thr Tyr Glu Glu Arg Thr Pro
                165             170             175
Ser Ala Gly Ala
                180


<210> 5284
<211> 224
<212> PRT
<213> S.epidermidis

<400> 5284
```

```
Tyr Asn Phe Asn Tyr Glu Val Asn Ile Met Asn Phe Asp Ser Tyr Ile
1               5               10              15
Phe Asp Phe Asp Gly Thr Leu Ile Asp Thr Thr Thr Cys His Val Lys
            20              25              30
Ala Thr Gln Ser Ala Phe Lys Arg Leu Asn Leu Asp Glu Pro Thr Glu
        35              40              45
Gln Ala Ile Leu His Thr Tyr His Leu Asn Leu Tyr Asn Asn Phe Lys
    50              55              60
Ala Leu Ala Ser His Glu Leu Ser Phe Tyr Gln Ile Glu Lys Leu Ile
65              70              75              80
Asp Glu Tyr Asn His Cys Phe Ser Asn Asp Glu Ile His Gln Ser Lys
            85              90              95
Glu Tyr Thr Gly Ile Ser Glu Ala Leu Lys Phe Leu His Asn Gln Lys
            100             105             110
Lys Lys Ile Phe Val Val Ser Asn Lys Glu Ile Leu Thr Thr Gln Lys
        115             120             125
Tyr Leu Asp Tyr Leu Gly Leu Ser Arg Phe Ile Thr Asp Ser Leu Gly
    130             135             140
Val Cys Ile Lys Asn Glu Asp Lys Leu Leu Cys Glu Thr Ile Gln Asn
145             150             155             160
Leu Ile Gln Lys His His Leu Met Ile Gly Lys Thr Val Tyr Ile Gly
            165             170             175
Asp Thr Ala Gln Asn Ile Lys Ser Ala Asn Gln Ala His Val Gln Thr
            180             185             190
Cys Ala Val Thr Trp Gly Ala Gln Ser Ala His Glu Leu Leu His Glu
        195             200             205
Asn Pro His Tyr Ile Val Asn Asp Pro Glu Glu Phe Leu Thr Ile Leu
    210             215             220
```

```
<210> 5285
<211> 136
<212> PRT
<213> S.epidermidis
```

```
<400> 5285
Glu Val Ile Asn Val Ile Trp Ile Ser Phe Ser Ser Val Ile Ile Val
1               5               10              15
Leu Val Leu Cys Ile Phe Ala Ile Tyr Lys Trp Ile Lys Ala Glu Lys
        20              25              30
Arg Val Asn Glu Leu Gln Glu Asp Lys His Gly Leu Gln Leu Asp Lys
    35              40              45
Leu His Leu Glu Arg Glu Val Ser Trp Leu Lys Asn Lys Asp Asn Lys
    50              55              60
Asn Asn Ile Gly Lys Tyr Val Val Glu Leu Lys Lys Gly Val Tyr Leu
65              70              75              80
Val Lys Lys Tyr Ile Gly Ser Tyr Gly Asn Thr Cys Ile Ile Thr Asp
            85              90              95
Asn Val Phe Glu Ala Leu Ser Tyr Asp Asp Leu Tyr Ser Ala Lys Glu
            100             105             110
Asp Ala Cys Ser Phe Asn Gly Arg Val Leu Glu His Lys Pro Asn Leu
        115             120             125
Glu Val Val Lys Gln Cys Gly Ala
    130             135
```

```
<210> 5286
<211> 336
```

<212> PRT
<213> S.epidermidis

<400> 5286
Glu Arg Ile Lys Glu Asp Ile Met Ala Asp Leu Leu Ser Val Leu Gln
1   5   10   15
Asp Lys Leu Ser Gly Lys Asn Val Lys Ile Val Leu Pro Glu Gly Glu
            20   25   30
Asp Glu Arg Val Leu Ile Ala Ala Thr Gln Leu Gln Lys Thr Asp Tyr
        35   40   45
Val Ser Pro Ile Val Leu Gly Asn Glu Asp Asn Ile Lys Ser Leu Ala
        50   55   60
Ser Lys His Ala Leu Asp Leu Thr Gln Ile Glu Ile Ile Asp Pro Ala
65   70   75   80
Thr Ser Glu Leu Lys Asp Glu Leu Val Asp Ala Phe Val Glu Arg Arg
                85   90   95
Lys Gly Lys Ala Thr Lys Glu Gln Ala Val Glu Leu Leu Asp Asn Val
            100   105   110
Asn Tyr Phe Gly Thr Met Leu Val Tyr Thr Gly Lys Ala Glu Gly Leu
        115   120   125
Val Ser Gly Ala Ala His Ser Thr Gly Asp Thr Val Arg Pro Ala Leu
        130   135   140
Gln Ile Ile Lys Thr Lys Pro Gly Val Ser Arg Thr Ser Gly Ile Phe
145   150   155   160
Phe Met Ile Lys Gly Asp Glu Gln Tyr Ile Phe Gly Asp Cys Ala Ile
            165   170   175
Asn Pro Glu Leu Asp Ala Gln Gly Leu Ala Glu Ile Ala Val Glu Ser
            180   185   190
Ala Lys Ser Ala Gln Ser Phe Gly Met Asp Pro Lys Val Ala Met Leu
            195   200   205
Ser Phe Ser Thr Lys Gly Ser Ala Lys Ser Asp Asp Val Thr Lys Val
        210   215   220
Gln Glu Ala Leu Lys Leu Ala Gln Glu Lys Ala Glu Ala Asp Gln Leu
225   230   235   240
Asp His Val Val Ile Asp Gly Glu Phe Gln Phe Asp Ala Ala Ile Val
            245   250   255
Pro Ser Val Ala Glu Lys Lys Ala Pro Gly Ala Lys Ile Gln Gly Asp
            260   265   270
Ala Asn Val Phe Val Phe Pro Ser Leu Glu Ala Gly Asn Ile Gly Tyr
        275   280   285
Lys Ile Ala Gln Arg Leu Gly Gly Tyr Asp Ala Val Gly Pro Val Leu
        290   295   300
Gln Gly Leu Asn Ser Pro Val Asn Asp Leu Ser Arg Gly Cys Ser Thr
305   310   315   320
Glu Asp Val Tyr Asn Leu Ser Ile Ile Thr Ala Ala Gln Ala Leu Gln
            325   330   335

<210> 5287
<211> 53
<212> PRT
<213> S.epidermidis

<400> 5287
Leu Lys Thr Asn Ser Asn Leu Glu Tyr Phe Ile Glu Ile Gln Phe Asp
1   5   10   15
Asn Ala Ile Ile Tyr Tyr Arg Phe Lys Asn Ile Leu Arg Asn Met Arg

```
                20                      25                      30
Leu Lys Asp Glu Lys Asp Asn Val His His Cys Ser Asn Asp Ile Arg
        35                      40                      45
His Arg Ile Phe Arg
    50
```

<210> 5288
<211> 64
<212> PRT
<213> S.epidermidis

<400> 5288
```
Val Met Ala Asn Arg Glu Glu Thr Ile Glu Val Glu Ala Thr Ile Lys
1                   5                   10                      15
Val Arg Cys Lys Tyr Pro Val Trp Val Asn Asn Gln Ile Thr Ala Ser
            20                      25                      30
Asp Glu Lys Glu Arg Ile Leu Asp Leu Ile Ser Lys Asn Pro Glu Lys
            35                      40                      45
Glu Leu Met Ser Glu Asp Phe Glu Leu Val Glu Leu Ile Glu Val Glu
        50                      55                      60
```

<210> 5289
<211> 271
<212> PRT
<213> S.epidermidis

<400> 5289
```
Asn Glu Tyr Lys Leu Ile Arg Phe Arg Gln Arg Asn Phe Phe Asn Val
1                   5                   10                      15
Cys Phe Phe Cys Leu Phe Leu Phe Thr Gln Leu Arg Ile Arg Arg Asp
            20                      25                      30
Lys Met Ile Tyr Ala Gly Ile Leu Ala Gly Gly Ile Gly Ser Arg Met
            35                      40                      45
Gly Asn Val Pro Leu Pro Lys Gln Phe Leu Ser Leu Gln Gly Lys Pro
        50                      55                      60
Ile Ile Ile His Thr Val Glu Lys Phe Leu Met Tyr Lys Asp Phe Asp
65                      70                      75                      80
Glu Ile Ile Ile Ala Thr Pro Gln Lys Trp Ile Asn Tyr Met Leu Asp
                85                      90                      95
Leu Leu Asn Asn Tyr Gln Leu Asp Asp Lys Lys Ile Lys Val Ile Gln
            100                     105                     110
Gly Gly Asp Asp Arg Asn His Ser Ile Met Asn Ile Ile Glu Ser Ile
            115                     120                     125
Glu Gln His Lys Lys Leu Asn Asp Glu Asp Ile Ile Val Thr His Asp
            130                     135                     140
Ala Val Arg Pro Phe Leu Thr Asn Arg Ile Ile Arg Glu Asn Val Glu
145                     150                     155                     160
Tyr Ala Ser Gln Tyr Gly Ala Val Asp Thr Val Val Asn Ala Val Asp
                165                     170                     175
Thr Ile Ile Ser Ser Asn Asp Ala Gln Phe Ile Ser Gly Ile Pro Ile
            180                     185                     190
Arg Ser Glu Met Tyr Gln Gly Gln Thr Pro Gln Thr Phe Lys Ile Lys
            195                     200                     205
Glu Leu Lys Asp Ser Tyr Leu Ser Leu Thr Gln Ser Gln Lys Glu Ile
            210                     215                     220
Leu Thr Asp Ala Cys Lys Ile Leu Val Glu Leu Gly Lys Pro Val Lys
```

```
225                    230                    235                    240
Leu Val Lys Gly Glu Leu Phe Asn Ile Lys Ile Thr Thr Pro Tyr Asp
                   245                    250                    255
Leu Lys Val Ala Asn Ser Ile Ile Thr Gly Ala Val Asp Asn Asp
                   260                    265                    270
```

<210> 5290
<211> 97
<212> PRT
<213> S.epidermidis

<400> 5290
```
Arg Met Tyr Lys Val Ile Glu Tyr Phe Glu Asp Leu Gln Asp Asp Asn
1                   5                   10                  15
Tyr Glu Tyr Asn Val Gly Lys Thr Phe Pro Arg Lys Gly Leu Asn Val
               20                  25                  30
Ser Asp Glu Arg Leu Thr Glu Leu Ser Thr Lys Glu Asn Arg Gln Asn
           35                  40                  45
Lys Pro Leu Ile Glu Arg Val Glu Ser Asp Lys Asp Leu Lys Gly Met
       50                  55                  60
Lys Val Ser Glu Leu Arg Glu Leu Ala Lys Glu Arg Glu Ile Glu Gly
65                  70                  75                  80
Phe Ser Ser Met Lys Lys Asp Glu Leu Val Glu Ala Leu Gly Ser Val
               85                  90                  95
Lys
```

<210> 5291
<211> 467
<212> PRT
<213> S.epidermidis

<400> 5291
```
Cys Lys His Asn Tyr Ile Lys Cys Leu Gln Met Val Met Lys Met Lys
1                   5                   10                  15
Lys Ile Met Glu Tyr Leu Gln His Tyr Ile Asn Gln Tyr Pro His Arg
               20                  25                  30
Leu Ala Leu Val Phe Glu Asp Arg His Leu Thr Tyr Gly Glu Leu Ser
           35                  40                  45
Lys Glu Ile Tyr Gln Ala Ser Met Arg Tyr Lys Glu Val Lys Leu Asn
       50                  55                  60
Lys Lys Val Gly Leu Met Asp Glu His Pro Val Asn Asn Ile Ile Asn
65                  70                  75                  80
Tyr Phe Ala Val His Gln Arg Gly Gly Ile Pro Cys Ile Phe Asn His
               85                  90                  95
Gln Trp Ser Asn Glu Arg Ile His Gln Leu Val Lys Ser Tyr Asp Ile
               100                 105                 110
Gln Trp Leu Ile Lys Asp Asn His Leu Thr Ser Asn His Asp Asn Ser
           115                 120                 125
Ile Tyr Asn Asp Glu Val Ile Pro Arg Asn Val Ile His Ile Gly Phe
       130                 135                 140
Thr Ser Gly Thr Thr Gly Leu Pro Lys Ala Phe Tyr Arg Asn Glu His
145                 150                 155                 160
Ser Trp Ile Val Ser Phe Lys Glu Asn Glu Lys Leu Leu Gln His Cys
               165                 170                 175
Glu Glu Thr Ile Val Ala Pro Gly Pro Leu Ser His Ser Leu Ser Leu
```

```
                  180                     185                     190
Tyr Ala Cys Ile Tyr Ala Leu Ser Thr Gly Lys Thr Phe Ile Gly Gln
        195                     200                     205
Lys Asn Phe Asn Pro Leu Ser Leu Met Arg Leu Ile Asn Gln Leu Asn
        210                     215                     220
Lys Thr Thr Ala Ile Phe Val Val Pro Thr Met Val Gln Gln Leu Ile
225                     230                     235                     240
Ser Thr Gln Arg His Cys Ser Ser Ile Lys Ser Ile Leu Ser Ser Gly
                    245                     250                     255
Ala Lys Leu Thr Leu Gln Gln Phe Gln Gln Ile Arg Asn Leu Tyr Pro
            260                     265                     270
Gln Ala Asn Leu Ile Glu Phe Phe Gly Thr Ser Glu Ala Ser Phe Ile
            275                     280                     285
Ser Tyr Asn Phe Asn Gln Ser Ser Pro Ala Asn Ser Val Gly Lys Leu
            290                     295                     300
Phe Pro His Val Glu Thr Arg Leu Leu Asn Gln Asp Asp Asp Ala Val
305                     310                     315                     320
Gly Leu Leu Ala Val Arg Ser Glu Met Val Phe Ser Gly Tyr Val Gly
                    325                     330                     335
Gln Ser Asn Gln Glu Gly Ala Trp Ile Lys Thr Gly Asp Phe Ala Tyr
            340                     345                     350
Ile Lys Asn Gln His Leu Phe Leu Val Gly Arg Glu Ser Asp Arg Ile
            355                     360                     365
Ile Val Gly Gly Ile Asn Val Tyr Pro Thr Ala Ile Glu Ser Leu Ile
            370                     375                     380
Met Asp Ile Glu Gly Ile Asp Glu Ala Leu Val Ile Gly Ile Pro His
385                     390                     395                     400
Ala Lys Phe Gly Glu Ile Ala Ile Leu Leu Tyr Ser Gly Lys Val Gln
                    405                     410                     415
Leu Asn Tyr Arg Gln Ile Lys Ser Phe Leu Met Lys His Leu Ser Arg
            420                     425                     430
Gln Glu Val Pro Ser Lys Leu Lys Lys Ile Asp His Met Ile Tyr Thr
            435                     440                     445
Glu Ser Gly Lys Ile Ala Arg Lys Glu Met Lys Asn Lys Phe Ile Asn
        450                     455                     460
Gly Glu Leu
465
```

<210> 5292
<211> 65
<212> PRT
<213> S.epidermidis

<400> 5292
```
Glu His Cys Asn Ser Asp Cys His Asn Ser His Asn Ser Lys Val Leu
1               5                   10                  15
Ser Ser Gln Leu Phe Thr Phe Thr His Tyr Asn Thr Asn Ile Leu Tyr
        20                      25                      30
Ile Ser Ile Val Leu Asn Val Lys Leu Met Arg His Ala Ile Ile Ser
        35                      40                      45
Ser Pro Tyr Ser Ile Leu Phe Ala Tyr Tyr Phe Leu Ile Gln Asn Phe
        50                      55                      60
Phe
65
```

<210> 5293

<211> 40
<212> PRT
<213> S.epidermidis

<400> 5293
Pro Ile Ser Asn Lys Ala Lys Ile Ile His Glu Ile Leu Asn Asn Arg
1   5   10   15
Val Ser Arg Ile Ala Phe Leu Gly Ser Lys Ile Leu Asp Ile Ser Asn
            20   25   30
Val Leu Gly Met Asp Phe Leu Lys
        35   40

<210> 5294
<211> 162
<212> PRT
<213> S.epidermidis

<400> 5294
Ser Met Ser Lys Leu Phe Glu Leu Lys Asp Ser Tyr Gln Gln Val Tyr
1   5   10   15
Asp Leu Ile Ala Glu Gln Glu Asp Glu Gln Ile Leu Lys Asp Thr Leu
            20   25   30
Ala Ser Ile Asn Asp Ala Ile Glu Asp Lys Ala Asp Gly Tyr Val Ala
        35   40   45
Val Ile Lys Ser Leu Glu Ala Asp Asn Asn Ala Ile Asp Glu Glu Ile
    50   55   60
Lys Arg Leu Arg Gln Arg Lys Thr Ser Asn Gln Asn Gly Val Lys Arg
65   70   75   80
Leu Lys Glu Ser Leu Gln Glu Val Met Glu Gln Thr Gly Lys Glu Lys
                85   90   95
Phe Lys Thr Ala Leu Asn Ser Tyr Ser Ile Ala Asn Asn Pro Pro Ser
            100   105   110
Leu Asp Val Thr Asp Glu Ser Leu Ile Pro Lys Gln Tyr Tyr Ile Glu
        115   120   125
Gln Lys Pro Lys Leu Asp Lys Lys Glu Leu Leu Lys Ala Ile Lys Asp
        130   135   140
Gly Leu Glu Leu Lys Gly Val Glu Leu Lys Gln Ser Arg Ser Leu Arg
145   150   155   160
Val Arg

<210> 5295
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5295
Phe Lys Ile Asn Arg Leu Asn Ser Ser Leu Phe Ile Phe Leu Ser Phe
1   5   10   15
Gly Lys Arg Met Ile Lys Lys Ile Asn Pro Ile Thr Asn Gln Ile Pro
            20   25   30
Lys Ala Met Tyr Asp Gly Ile Glu Ser Ala Ala Gly Glu Pro Gly Ile
        35   40   45
Ser Asn Lys His Lys Asn Thr Lys Asp Thr Ile Asp Pro Ile Ile Pro
    50   55   60
Lys Ile Leu

65

<210> 5296
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5296
Ile Ser Ser Lys Val Leu Leu Ala Ser Thr Phe Asn Ile Leu Thr Leu
1   5   10   15
Phe Val Thr Ser Ser Gln Gln Leu Ile Phe Ala Phe Ile Asn Lys Ile
            20   25   30
Gln Ser Thr Ser Lys Phe His Ser Asn Tyr Tyr Asn Ile Tyr Asn Leu
            35   40   45

<210> 5297
<211> 141
<212> PRT
<213> S.epidermidis

<400> 5297
Lys Ser Val Leu Leu Ala Lys Val Lys Tyr Gly Asn Trp Asp Leu Val
1   5   10   15
Lys Glu Leu Glu Glu Phe Glu Lys Glu Thr Ile Arg Trp Ala Lys Lys
            20   25   30
Gly Ile Ala Lys Thr Thr Thr Ile Ile His Asn Ser Ile Val Ser Asn
            35   40   45
Met Pro Val Asp Thr Gly Tyr Leu Arg Glu Ser Val Ser Met Asp Phe
            50   55   60
Lys Lys Gly Gly Leu Thr Gly Val Ile Asn Ile Gly Ser Glu Tyr Ala
65   70   75   80
Val Tyr Val Asn Tyr Gly Thr Gly Ile Tyr Val Val Gly Pro Gly Gly
                    85   90   95
Ser Arg Ala Lys Asn Ile Pro Trp Arg Tyr Lys Asp Ala Asp Gly His
            100   105   110
Trp His Thr Thr Lys Gly Gln His Ala Gln Pro Phe Trp Glu Pro Ala
            115   120   125
Ile Asp Glu Gly Arg Ala Phe Phe Asn Lys Tyr Phe Ser
            130   135   140

<210> 5298
<211> 317
<212> PRT
<213> S.epidermidis

<400> 5298
Met Ala Asn Asn Lys Asp Asn Pro Lys Ile Thr Asn Gln Asn Asp Ile
1   5   10   15
Asp Asn Tyr Ile Asp Arg Leu Val Asn Gln Ala Asn Lys Glu Ile Glu
            20   25   30
Thr Leu Phe Ala Lys Arg Leu Lys Glu Ile Lys Gln Ile Ile Ala Asn
            35   40   45
Met Tyr Glu Lys Tyr Asp Arg Asp Glu Pro Gln Val Thr Trp Thr Glu
            50   55   60
Phe Asn Lys Tyr Asn Arg Leu Asn Lys Glu Leu Asn Arg Ile Gly Gln
65   70   75   80

```
Met Leu Ser Gln Asp Tyr Arg Glu Val Ala Lys Ala Ile Lys Gln Ser
                85                  90                  95
Gln Gln Asn Ile Tyr Ile Glu Lys Tyr Met Met Ser Leu Phe Leu Tyr
                100             105                 110
Glu Val Ala Ser Gln Thr Ser Met Asn Phe Asp Ile Pro Thr Thr Gln
            115             120             125
Thr Ile Gln Thr Ala Ile Glu Gln Pro Ile Glu Phe Ile Lys Leu Val
    130             135             140
Pro Thr Leu Gln Lys His Arg Asp Asp Thr Leu Lys Arg Ile Arg Met
145             150             155                 160
His Ile Thr Gln Gly Ile Met Ser Gly Glu Gly Tyr Ser Lys Ile Ala
                165             170                 175
Lys Ala Leu Arg Asp Asp Leu Gly Met Ala Lys Ala Gln Ser Val Arg
            180             185             190
Val Ala Arg Thr Glu Thr Gly Arg Ala Leu Ser Gln Ala Gly Leu Asp
            195             200             205
Ser Ala Met Val Ala Lys Asp Asn Gly Leu Asp Met Lys Lys Arg Trp
    210             215             220
Tyr Ser Thr Lys Asp Thr Arg Thr Arg Asp Thr His Arg His Leu Asp
225             230             235                 240
Gly Thr Ser Val Asp Ile Glu Asp Asn Phe His Ser Ser Gly Cys Val
                245             250                 255
Gly Pro Ala Pro Lys Leu Phe Val Gly Val Ala Ser Ala Lys Glu Asn
            260             265             270
Ile Asn Cys Arg Cys Lys Leu Leu Tyr Tyr Ile Asp Glu Asp Glu Leu
            275             280             285
Pro Thr Thr Met Arg Thr Lys Glu Asp Gly Ala Ile Pro Phe Thr Thr
    290             295             300
Tyr Arg Glu Trp Glu Lys Asp Lys Arg Lys Gly Gly Val
305             310             315
```

<210> 5299
<211> 59
<212> PRT
<213> S.epidermidis

<400> 5299
```
Leu Lys Asn Lys Gln Ile Lys Asn Trp Gly Lys Arg Asn Met Asp Lys
1               5                   10                  15
Val Val Ile Asp Leu Tyr Lys Lys Lys Leu Tyr Thr Asp Glu Thr Phe
            20              25              30
Lys Lys Phe Val Arg Val Gly Trp Ile Thr Pro Glu Gln Phe Lys Glu
        35              40                  45
Thr Thr Gly Lys Asp Tyr Glu Pro Gln Val Lys
    50              55
```

<210> 5300
<211> 80
<212> PRT
<213> S.epidermidis

<400> 5300
```
Lys Glu Leu Lys Met Asn Ser Arg Val Ile Thr Lys Glu Asn Lys Lys
1               5                   10                  15
Glu Ile Ala His Arg Ile Lys Gln Ile Arg Leu Gln Arg Asn Phe Asp
                20              25                  30
```

Ile Asn Glu Phe Ala Glu Ile Leu Tyr Val Ser Pro Phe Ser Ile Lys
        35   40   45
Gln Trp Glu Glu Gly Lys Arg Ile Pro Asn Ile Lys Lys Ile Lys Leu
        50   55   60
Ile Ala Phe Val Phe Lys Thr Thr Pro Glu Trp Leu Leu Tyr Gly Glu
65   70   75   80

<210> 5301
<211> 111
<212> PRT
<213> S.epidermidis

<400> 5301
Lys Arg Ile Asn Lys Ile Glu Ser Thr Gln Cys Val Gly Phe Leu Ile
1   5   10   15
Tyr Leu Lys Gly Asp Met Ser Met Lys Thr Asp Val Gly Ser Ile Val
        20   25   30
Arg Thr Ile Val Phe Ile Leu Ala Trp Val Asn Gln Phe Leu Ala Thr
        35   40   45
Lys His Ile Ser Pro Ile Pro Val Asp Glu Val Thr Ile Ser Ser Ile
        50   55   60
Ile Thr Gly Ala Ile Ser Leu Trp Thr Trp Trp Lys Asn Asn Asn Phe
65   70   75   80
Ser His Ala Ala Gln Lys Gly Gln Gln Lys Leu His Glu Val Lys Ala
                85   90   95
Gly Thr Glu Asn Thr Asn Gly Lys Ala Pro Ile Gly Gly Asn Asp
                100   105   110

<210> 5302
<211> 125
<212> PRT
<213> S.epidermidis

<400> 5302
Arg Met Val Lys Ile Lys Lys Lys Val Glu Met Thr Leu Pro Glu Leu
1   5   10   15
Ile Glu Trp Ala Trp Lys Asn Gly Val Lys Glu Lys Ala Phe Tyr Ser
        20   25   30
Asn Ile Asp Arg Gly Ser Val Tyr Phe Asp Met Val Gln Thr Val Ser
        35   40   45
Ile Glu Tyr Ser Ile Val Val Asp Glu Thr Phe Thr Val Glu Val Glu
        50   55   60
Glu Glu Val Thr Glu Glu Thr Lys Ile Pro Glu Met Leu Glu Ile Phe
65   70   75   80
Val Asn Gly Gly Gly Val Lys Arg Val Glu Lys Ser Ile Asn Glu Leu
                85   90   95
Lys Asp Asp Phe Ser Lys Glu Phe Trp Leu Lys Asp Gly Asp Thr Met
                100   105   110
Thr Leu Ile Trp Lys Asp Gly Glu Leu Val Gly Asp Glu
                115   120   125

<210> 5303
<211> 54
<212> PRT
<213> S.epidermidis

<400> 5303
Pro Lys Pro Asn Asn Asn Val Ala Pro Ile Thr Ile Asp Ala Val Pro
1   5   10   15
Thr Val Asn Phe Leu Ile Ala Tyr Leu Leu Asp Leu Phe Ala Ile Gly
            20   25   30
Phe Phe Leu Val Ser Lys Leu Phe Phe Phe Asn His Lys Asn Ser Leu
        35   40   45
Ser Leu Thr Ile Ser Met
    50

<210> 5304
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5304
Ile Phe Thr Lys Ile Lys Ile Leu Gln Met Phe Trp Gln Ile Phe Tyr
1   5   10   15
Arg Arg Gly Lys Thr Met Lys Asn Tyr Asp Leu Ile Ile Ile Gly Phe
            20   25   30
Gly Lys Ala Gly Lys Thr Leu Ala Ala His Ala Ala Ser His Gly Gln
        35   40   45
Lys Val Ala Val Val Glu Arg Ser Thr Lys Met Tyr Gly Gly Thr Cys
    50   55   60
Ile Asn Ile
65

<210> 5305
<211> 461
<212> PRT
<213> S.epidermidis

<400> 5305
Leu Met Thr Asn Lys Thr Arg Ser Gln Ala His Ala Tyr Leu Asp Arg
1   5   10   15
Leu Lys Gly Tyr Trp Trp Asp Phe Asp Gly Val Tyr Gly Ala Gln Cys
            20   25   30
Phe Asp Leu Ala Asn Gln Tyr Trp Tyr Tyr Val Thr Gly His Thr Leu
        35   40   45
Ser Gly Met Tyr Ala Lys Asp Ile Pro Phe Val Asn Asp Phe Asn Gly
    50   55   60
Tyr Ala Asn Val Val Lys Asn Tyr Asn Ser Tyr Ile Pro Lys Lys Gly
65   70   75   80
Thr Leu Val Val Phe Pro Tyr Glu Tyr Gly Asn Gly Cys Gly His Val
                85   90   95
Ala Ile Ile Glu Ser Ala Thr Gln Asn Tyr Phe Tyr Ser Leu Asp Gln
            100   105   110
Asn Trp Tyr Gly Gly Ala Arg Asn Asn Pro Pro Glu Val Ala Gln Thr
            115   120   125
Ile Tyr His Glu Tyr His Pro Asp Met Tyr Phe Val Glu Pro Leu Tyr
    130   135   140
Ser Lys Glu Thr Lys Val Ser Lys Ile Lys Ala Lys Thr Thr Lys Pro
145   150   155   160
Lys Pro Val Lys Lys Val Lys Lys Lys Val Met Ile Val Ala Gly
                165   170   175
His Gly Tyr Asn Asp Pro Gly Ala Ile Gly Asn Gly Tyr Asn Glu Arg

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                 180                    185                   190
Asp Phe Ile Arg Lys Asn Ile Val Asp Asn Val Ser Lys Tyr Leu Lys
         195                    200                   205
Asp Ala Gly His Thr Val Gly Ile Tyr Gly Lys Lys Gln Asp Met Tyr
         210                    215                   220
Gln Asp Thr Ala Tyr Gly Val Arg Val Gly Asn His Arg Asp Tyr Gly
225                    230                   235                   240
Leu Tyr Trp Val Lys Ser Gln Gly Tyr Asp Thr Val Ile Glu Phe His
                 245                    250                   255
Leu Asp Ser Ala Gly Pro Lys Ala Thr Gly Gly His Thr Ile Ile Pro
                 260                    265                   270
Ala Gly Tyr Pro Ala Asn Ile Thr Asp Lys Asn Ile Gln Ala Ala Leu
         275                    280                   285
Lys Gln Ser Val Gly Thr Ile Arg Gly Ile Thr Gln Arg Asn Asp Leu
         290                    295                   300
Leu Asn Cys Asn Val Ala Asn Asp Ile Gly Ile Glu Tyr Arg Leu Val
305                    310                   315                   320
Glu Leu Gly Phe Ile Thr Ser Tyr Lys Asp Met Lys Tyr Ile Asn Glu
                 325                    330                   335
Asn Ile Lys Pro Phe Thr Lys Ser Ile Ala Ser Asp Ile Asn Gly Lys
                 340                    345                   350
Pro Ile Gly Gly Thr Ser Ala Gly Lys Val Lys Ser Val Lys Lys Thr
         355                    360                   365
Trp Asp Trp Lys Gly Arg Phe Tyr Pro Asn Thr Thr Ile Lys Val Arg
         370                    375                   380
Lys Lys Pro Asn Gly Glu Ile Val Glu Lys Gly Ser Trp Leu Tyr Gly
385                    390                   395                   400
Lys Asp Asp Trp Val Asp Ile Val Gln Leu Tyr Lys Asp Thr Lys Lys
                 405                    410                   415
Lys Leu Trp Trp Gly Lys Phe Lys Tyr Pro Thr Asn Pro Ser Ser Gly
                 420                    425                   430
Tyr Phe Tyr Cys Ala Leu Gly Glu Ile Thr Asp Lys Gln Glu Arg Ile
         435                    440                   445
Lys Lys Glu Lys Lys Leu Tyr Gly Lys Ile Lys Trp Gln
         450                    455                   460
```

```
<210> 5306
<211> 70
<212> PRT
<213> S.epidermidis

<400> 5306
Val His Pro Leu Ile Asn Asn Asp Ile Leu Ile Glu Ser Asp Ile Val
1                    5                     10                    15
Val Thr Leu Cys Ser Asp Ala Asp Ala Asn Cys Pro Val Leu Pro Lys
                 20                     25                    30
Asn Val Thr Lys Glu His Trp Gly Phe Asp Asp Pro Ala Gly Lys Asp
         35                     40                    45
Trp Ser Glu Phe Gln Arg Val Arg Asp Glu Ile Lys Ala Ala Ile Glu
         50                     55                    60
Thr Phe Ala His Arg Val
65                     70

<210> 5307
<211> 196
<212> PRT
```

<213> S.epidermidis

<400> 5307
Lys Gln Gln Asn Asn Val Glu Gln Leu Leu Lys Val Asn Lys Met Ser
1   5   10   15
Glu Phe Asn Asn Tyr Arg Leu Ile Leu Glu Glu Leu Asp Ser Thr Leu
                20   25   30
Ser Gln Val Asp Asn Thr Glu Tyr Glu Arg Phe Ala Asn Asp Val Ile
            35   40   45
Gly Ala Asp Arg Ile Phe Thr Ala Gly Lys Gly Arg Ser Gly Phe Val
        50   55   60
Ala Asn Ser Phe Ala Met Arg Leu Asn Gln Leu Gly Lys Asn Ala Tyr
65   70   75   80
Val Val Gly Glu Ser Thr Thr Pro Ser Ile Lys Glu His Asp Leu Phe
                85   90   95
Ile Ile Ile Ser Gly Ser Gly Ser Thr Glu His Leu Arg Leu Leu Ala
            100   105   110
Glu Lys Ala Gln Ser Glu Gly Ala Lys Ile Val Leu Leu Thr Thr Asn
        115   120   125
Ala Glu Ser Pro Ile Gly Asn Leu Ala Glu Thr Val Val Glu Leu Pro
        130   135   140
Ala Gly Thr Lys His Asp Val Glu Gly Ser Lys Gln Pro Leu Gly Ser
145   150   155   160
Leu Phe Glu Gln Ala Ser Leu Ile Phe Leu Asp Ser Val Val Leu Pro
                165   170   175
Leu Met Asp Ala Phe His Ile Ser Glu Lys Thr Met Gln Glu Asn His
            180   185   190
Ala Asn Leu Glu
        195

<210> 5308
<211> 231
<212> PRT
<213> S.epidermidis

<400> 5308
Met Ala Lys Lys Gly Lys Lys Tyr Gln Glu Ala Ala Ser Lys Val Asp
1   5   10   15
Arg Thr Gln Tyr Tyr Ser Val Glu Glu Ala Ile Lys Leu Ala Lys Glu
                20   25   30
Thr Ser Val Ala Asn Phe Asp Ala Ser Val Glu Val Ala Phe Arg Leu
            35   40   45
Gly Ile Asp Thr Arg Lys Asn Asp Gln Gln Ile Arg Gly Ala Val Val
        50   55   60
Leu Pro His Gly Thr Gly Lys Ser Gln Arg Val Leu Val Phe Ala Lys
65   70   75   80
Gly Asp Lys Ile Thr Glu Ala Glu Glu Ala Gly Ala Asp Tyr Val Gly
                85   90   95
Glu Ala Asp Tyr Val Gln Lys Ile Gln Gln Gly Trp Phe Asp Phe Asp
                100   105   110
Val Val Val Ala Thr Pro Asp Met Met Gly Glu Val Gly Lys Leu Gly
            115   120   125
Arg Val Leu Gly Pro Lys Gly Leu Met Pro Asn Pro Lys Thr Gly Thr
        130   135   140
Val Thr Met Asp Val Lys Lys Ala Val Glu Glu Ile Lys Ala Gly Lys
145   150   155   160

```
Val Glu Tyr Arg Ala Glu Lys Ala Gly Ile Val His Ala Ser Ile Gly
            165                 170                 175
Lys Val Ser Phe Asp Glu Glu Lys Leu Val Asp Asn Phe Arg Thr Leu
            180                 185                 190
Gln Asp Val Leu Ala Lys Ala Lys Pro Ala Ser Ala Lys Gly Thr Tyr
            195                 200                 205
Phe Lys Ser Val Ala Val Thr Thr Thr Met Gly Pro Gly Val Lys Val
    210                 215                 220
Asp Thr Ser Ser Phe Lys Leu
225                 230
```

<210> 5309
<211> 930
<212> PRT
<213> S.epidermidis

<400> 5309
```
Leu Lys Lys Asn Asn Leu Leu Thr Lys Lys Lys Pro Ile Ala Asn Lys
1               5                   10                  15
Ser Asn Lys Tyr Ala Ile Arg Lys Phe Thr Val Gly Thr Ala Ser Ile
            20                  25                  30
Val Ile Gly Ala Thr Leu Leu Phe Gly Leu Gly His Asn Glu Ala Lys
            35                  40                  45
Ala Glu Glu Asn Thr Val Gln Asp Val Lys Asp Ser Asn Met Asp Asp
    50                  55                  60
Glu Leu Ser Asp Ser Asn Asp Gln Ser Ser Asn Glu Glu Lys Asn Asp
65                  70                  75                  80
Val Ile Asn Asn Ser Gln Ser Ile Asn Thr Asp Asp Asp Asn Gln Ile
            85                  90                  95
Lys Lys Glu Glu Thr Asn Ser Asn Asp Ala Ile Glu Asn Arg Ser Lys
            100                 105                 110
Asp Ile Thr Gln Ser Thr Thr Asn Val Asp Glu Asn Glu Ala Thr Phe
            115                 120                 125
Leu Gln Lys Thr Pro Gln Asp Asn Thr Gln Leu Lys Glu Glu Val Val
    130                 135                 140
Lys Glu Pro Ser Ser Val Glu Ser Ser Asn Ser Ser Met Asp Thr Ala
145                 150                 155                 160
Gln Gln Pro Ser His Thr Thr Ile Asn Ser Glu Ala Ser Ile Gln Thr
            165                 170                 175
Ser Asp Asn Glu Glu Asn Ser Arg Val Ser Asp Phe Ala Asn Ser Lys
            180                 185                 190
Ile Ile Glu Ser Asn Thr Glu Ser Asn Lys Glu Glu Asn Thr Ile Glu
            195                 200                 205
Gln Pro Asn Lys Val Arg Glu Asp Ser Ile Thr Ser Gln Pro Ser Ser
    210                 215                 220
Tyr Lys Asn Ile Asp Glu Lys Ile Ser Asn Gln Asp Glu Leu Leu Asn
225                 230                 235                 240
Leu Pro Ile Asn Glu Tyr Glu Asn Lys Val Arg Pro Leu Ser Thr Thr
            245                 250                 255
Ser Ala Gln Pro Ser Ser Lys Arg Val Thr Val Asn Gln Leu Ala Ala
            260                 265                 270
Glu Gln Gly Ser Asn Val Asn His Leu Ile Lys Val Thr Asp Gln Ser
            275                 280                 285
Ile Thr Glu Gly Tyr Asp Asp Ser Asp Gly Ile Ile Lys Ala His Asp
            290                 295                 300
Ala Glu Asn Leu Ile Tyr Asp Val Thr Phe Glu Val Asp Asp Lys Val
```

```
305                     310                     315                     320
Lys Ser Gly Asp Thr Met Thr Val Asn Ile Asp Lys Asn Thr Val Pro
                325                     330                     335
Ser Asp Leu Thr Asp Ser Phe Ala Ile Pro Lys Ile Lys Asp Asn Ser
                340                     345                     350
Gly Glu Ile Ile Ala Thr Gly Thr Tyr Asp Asn Thr Asn Lys Gln Ile
                355                     360                     365
Thr Tyr Thr Phe Thr Asp Tyr Val Asp Lys Tyr Glu Asn Ile Lys Ala
            370                     375                     380
His Leu Lys Leu Thr Ser Tyr Ile Asp Lys Ser Lys Val Pro Asn Asn
385                     390                     395                     400
Asn Thr Lys Leu Asp Val Glu Tyr Lys Thr Ala Leu Ser Ser Val Asn
                405                     410                     415
Lys Thr Ile Thr Val Glu Tyr Gln Lys Pro Asn Glu Asn Arg Thr Ala
                420                     425                     430
Asn Leu Gln Ser Met Phe Thr Asn Ile Asp Thr Lys Asn His Thr Val
                435                     440                     445
Glu Gln Thr Ile Tyr Ile Asn Pro Leu Arg Tyr Ser Ala Lys Glu Thr
            450                     455                     460
Asn Val Asn Ile Ser Gly Asn Gly Asp Glu Gly Ser Thr Ile Ile Asp
465                     470                     475                     480
Asp Ser Thr Ile Ile Lys Val Tyr Lys Val Gly Asp Asn Gln Asn Leu
                485                     490                     495
Pro Asp Ser Asn Arg Ile Tyr Asp Tyr Ser Glu Tyr Glu Asp Val Thr
                500                     505                     510
Asn Asp Asp Tyr Ala Gln Leu Gly Asn Asn Asn Asp Val Asn Ile Asn
                515                     520                     525
Phe Gly Asn Ile Asp Ser Pro Tyr Ile Ile Lys Val Ile Ser Lys Tyr
            530                     535                     540
Asp Pro Asn Lys Asp Asp Tyr Thr Thr Ile Gln Gln Thr Val Thr Met
545                     550                     555                     560
Gln Thr Thr Ile Asn Glu Tyr Thr Gly Glu Phe Arg Thr Ala Ser Tyr
                565                     570                     575
Asp Asn Thr Ile Ala Phe Ser Thr Ser Ser Gly Gln Gly Gln Gly Asp
            580                     585                     590
Leu Pro Pro Glu Lys Thr Tyr Lys Ile Gly Asp Tyr Val Trp Glu Asp
            595                   ` 600                     605
Val Asp Lys Asp Gly Ile Gln Asn Thr Asn Asp Asn Glu Lys Pro Leu
    610                     615                     620
Ser Asn Val Leu Val Thr Leu Thr Tyr Pro Asp Gly Thr Ser Lys Ser
625                     630                     635                     640
Val Arg Thr Asp Glu Glu Gly Lys Tyr Gln Phe Asp Gly Leu Lys Asn
                645                     650                     655
Gly Leu Thr Tyr Lys Ile Thr Phe Glu Thr Pro Glu Gly Tyr Thr Pro
            660                     665                     670
Thr Leu Lys His Ser Gly Thr Asn Pro Ala Leu Asp Ser Glu Gly Asn
        675                     680                     685
Ser Val Trp Val Thr Ile Asn Gly Gln Asp Asp Met Thr Ile Asp Ser
    690                     695                     700
Gly Phe Tyr Gln Thr Pro Lys Tyr Ser Leu Gly Asn Tyr Val Trp Tyr
705                     710                     715                     720
Asp Thr Asn Lys Asp Gly Ile Gln Gly Asp Asp Glu Lys Gly Ile Ser
                725                     730                     735
Gly Val Lys Val Thr Leu Lys Asp Glu Asn Gly Asn Ile Ile Ser Thr
            740                     745                     750
Thr Thr Thr Asp Glu Asn Gly Lys Tyr Gln Phe Asp Asn Leu Asn Ser
```

```
           755                    760                    765    ,
Gly Asn Tyr Ile Val His Phe Asp Lys Pro Ser Gly Met Thr Gln Thr
       770                    775                    780
Thr Thr Asp Ser Gly Asp Asp Asp Glu Gln Asp Ala Asp Gly Glu Glu
785                    790                    795                    800
Val His Val Thr Ile Thr Asp His Asp Asp Phe Ser Ile Asp Asn Gly
                   805                    810                    815
Tyr Tyr Asp Asp Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser
               820                    825                    830
Asp Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp
           835                    840                    845
Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp
       850                    855                    860
Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Asp Ser Gly Leu Asp
865                    870                    875                    880
Asn Ser Ser Asp Lys Asn Thr Lys Asp Lys Leu Pro Asp Thr Gly Ala
                   885                    890                    895
Asn Glu Asp His Asp Ser Lys Gly Thr Leu Leu Gly Ala Leu Phe Ala
               900                    905                    910
Gly Leu Gly Ala Leu Leu Leu Gly Lys Arg Arg Lys Asn Arg Lys Asn
           915                    920                    925
Lys Asn
   930
```

<210> 5310
<211> 99
<212> PRT
<213> S.epidermidis

<400> 5310
```
Phe Met Lys Lys Ile Ile Ile Thr Gly Ala Leu Gly Gln Ile Gly Thr
1               5                    10                   15
Glu Leu Val Ile Lys Cys Arg Glu Arg Tyr Gly Thr Glu Asn Val Leu
           20                    25                    30
Ala Thr Asp Ile Arg Lys Pro Glu Pro His Ser Pro Val Lys Asn Gly
       35                    40                    45
Pro Phe Glu Ile Leu Asp Val Thr Asp Arg Asn Arg Leu Phe Glu Thr
   50                    55                    60
Val Arg Tyr Phe Asn Ala Asp Thr Leu Met His Met Ala Ala Leu Leu
65                    70                    75                    80
Ser Ala Thr Ala Glu Lys Lys Pro Leu Val Ala Trp Asp Leu Asn Met
               85                    90                    95
Gly Asp Leu
```

<210> 5311
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5311
```
Leu Ile Glu Lys Pro Arg Tyr Gln Asn Asn Gly Val Leu Thr Ser Gln
1               5                    10                   15
Arg Ile Gln Val Val Phe Ala Leu Lys Ser Ile Leu Asn Arg Leu Asn
           20                    25                    30
Ile His Phe Gln Pro Asn Tyr Leu Ile Arg Lys
```

35   40

```
<210> 5312
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5312
Gly Lys Glu Lys Ser Ile Leu Val Pro Ser Leu Leu Leu Lys Lys Leu
1               5                   10                  15
Ile Phe Asp Glu Asn Thr Asn Leu Ile Thr Glu Lys Ile Gly Asp Asp
            20                  25                  30
Asn Asn Ile Thr Cys Asn Leu Ile Lys Val Val Phe Tyr Leu Tyr Cys
        35                  40                  45
Ile His Asn Lys Ile Asn Ile Tyr Phe Glu Tyr Leu Glu Asn Ser Leu
    50                  55                  60
Asn Ser Arg Ile Thr Ile Asp Ile Ile
65                  70


<210> 5313
<211> 164
<212> PRT
<213> S.epidermidis

<400> 5313
Asn Val Arg Asn His Ile Tyr Ser Gln Cys Leu Lys Asn Thr Leu Val
1               5                   10                  15
Val Asn Gly Val Arg Thr Leu Trp Lys Met Thr Ser Ser Leu Glu Arg
            20                  25                  30
Leu Arg Asn Asp Met Asn Ile Lys Leu Ile Lys Glu Lys Ile Asp Asn
        35                  40                  45
Glu Asn Lys Arg Met Gly Ser Glu Leu Glu Tyr Thr Phe Lys Tyr Lys
    50                  55                  60
Gly His Lys Cys Lys Val Lys Arg Ile Glu Glu Tyr Gly His Leu Cys
65                  70                  75                  80
Gly Tyr Ile Tyr Leu Asn Val Lys Arg Gly Ser Glu Glu Tyr Glu Ile
            85                  90                  95
Ile Asp Glu Leu Ala His Cys Gly Val Ser Tyr His Lys Gly Asn Leu
            100                 105                 110
Ile Gly Phe Asp Cys Ala His Ala Gly Asp Phe Ser Leu Arg Met Tyr
        115                 120                 125
Asn Leu Phe Glu Asn Lys Thr Tyr Leu Ser Asp Leu Glu Thr Tyr Lys
    130                 135                 140
Asp Leu Glu Tyr Val Glu Asn Asn Ile Lys Glu Ile Ile Asp Ser Leu
145                 150                 155                 160
Gln Lys Gly Gly


<210> 5314
<211> 187
<212> PRT
<213> S.epidermidis

<400> 5314
Asn Val Gly Lys Gln Arg Lys Met Thr Tyr Phe Lys Trp Gln Asp Lys
1               5                   10                  15
```

```
His Val Lys Phe Leu Lys Glu Asn Ala Asn Gly Asn Asn Ser Glu Asp
            20                  25                  30
Leu Thr Gln Ser Phe Asn Asn Arg Phe Gly Thr Asn Gln Ser Lys Ser
        35                  40                  45
Ser Leu Lys Ser Lys Met Tyr Gln Ile Gly Ile Lys Phe Asn Asn Asn
    50                  55                  60
Thr Gly Arg Phe Lys Lys Gly Asp His Ser Tyr Asn Thr Tyr Ala Ile
65                  70                  75                  80
Gly Thr Lys Ser Ile Asp Lys Asp Gly Tyr Val Ile Ile Lys His Ser
                85                  90                  95
Asn Ser Lys Gly Asp Tyr Asn Lys Asn Trp Lys Leu Tyr His His Tyr
            100                 105                 110
Leu Trp Glu Gln Lys His Gly Arg Ile Pro Glu Gly Tyr Val Val Ile
        115                 120                 125
Phe Leu Asn Gly Asp Asn Arg Asp Phe Arg Ile Lys Asn Leu Tyr Cys
    130                 135                 140
Val Glu Arg Gly Val Trp Leu Lys Val Ile Asn Asn Asp Met Arg Phe
145                 150                 155                 160
Asp Asn Pro Glu Leu Val Glu Ser Ala Ile His Leu Ser Lys Leu Met
                165                 170                 175
Ile Lys Gln Lys Asn Ile Glu Lys Arg Arg Arg
            180                 185
```

<210> 5315
<211> 192
<212> PRT
<213> S.epidermidis

<400> 5315
```
Val Arg Cys Leu Lys Leu Leu Cys Glu Asn Cys His Phe Asn Glu Ala
1               5                   10                  15
Glu Val Lys Leu Thr Val Lys Gly Ile Asp Ser Thr His Glu Lys Trp
            20                  25                  30
Val Cys Ser Val Cys Ala Gln Gly Glu Asn Pro Trp Leu His Ser Asn
        35                  40                  45
Asp Asp Asn Thr Tyr His Thr His Gln Asp Asp Ile Glu Glu Ala Phe
    50                  55                  60
Val Val Lys Gln Ile Leu Gln His Leu Ala Ala Lys His Gly Ile Asn
65                  70                  75                  80
Phe His Glu Met Ala Phe Lys Glu Glu Lys Lys Cys Pro Thr Cys Gln
                85                  90                  95
Met Thr Leu Lys Asp Ile Ala His Val Gly Lys Leu Gly Cys Ala Asp
            100                 105                 110
Cys Tyr Ala Thr Phe Lys Glu Asp Ile Ile Asp Ile Val Gln Arg Val
        115                 120                 125
Gln Gly Gly Gln Phe Glu His Val Gly Lys Thr Pro Gln Ser Ser Tyr
    130                 135                 140
Lys Lys Leu Ala Ile Lys Lys Gln Ile Glu Glu Lys Ser Lys Tyr Leu
145                 150                 155                 160
Asn Lys Leu Ile Asp Gly Gln Glu Phe Glu Glu Ala Ala Ile Val Arg
                165                 170                 175
Asp Glu Ile Lys Ala Leu Lys Ser Glu Ser Glu Val Ser His Asp Glu
            180                 185                 190
```

<210> 5316
<211> 1215

```
<212> PRT
<213> S.epidermidis

<400> 5316
Ser Lys Leu Lys Glu Val Gly Ser Leu Ile Asp Val Asn Asn Phe His
1               5                   10                  15
Tyr Met Lys Ile Gly Leu Ala Ser Pro Glu Lys Ile Arg Ser Trp Ser
            20                  25                  30
Tyr Gly Glu Val Lys Lys Pro Glu Thr Ile Asn Tyr Arg Thr Leu Lys
        35                  40                  45
Pro Glu Lys Asp Gly Leu Phe Cys Glu Arg Ile Phe Gly Pro Thr Lys
    50                  55                  60
Asp Trp Glu Cys Ser Cys Gly Lys Tyr Lys Arg Val Arg Tyr Lys Gly
65                  70                  75                  80
Met Val Cys Asp Arg Cys Gly Val Glu Val Thr Lys Ser Lys Val Arg
                85                  90                  95
Arg Glu Arg Met Gly His Ile Glu Leu Ala Ala Pro Val Ser His Ile
            100                 105                 110
Trp Tyr Phe Lys Gly Ile Pro Ser Arg Met Gly Leu Leu Leu Asp Met
        115                 120                 125
Ser Pro Arg Ala Leu Glu Glu Val Ile Tyr Phe Ala Ser Tyr Val Val
    130                 135                 140
Val Asp Pro Gly Pro Thr Gly Leu Glu Lys Lys Thr Leu Leu Ser Glu
145                 150                 155                 160
Ala Glu Phe Arg Glu Tyr Tyr Asp Lys Tyr Pro Asn Gln Phe Val Ala
                165                 170                 175
Lys Met Gly Ala Glu Gly Ile Lys Asp Leu Leu Glu Glu Ile Asp Leu
            180                 185                 190
Asp Glu Glu Leu Lys Glu Leu Arg Asp Glu Leu Glu Ser Ala Thr Gly
        195                 200                 205
Gln Arg Leu Thr Arg Ala Ile Lys Arg Leu Glu Val Val Glu Ser Phe
    210                 215                 220
Arg Asn Ser Gly Asn Asn Pro Ser Trp Met Ile Leu Asp Val Leu Pro
225                 230                 235                 240
Ile Ile Pro Pro Glu Ile Arg Pro Met Val Gln Leu Asp Gly Gly Arg
                245                 250                 255
Phe Ala Thr Ser Asp Leu Asn Asp Leu Tyr Arg Arg Val Ile Asn Arg
            260                 265                 270
Asn Asn Arg Leu Lys Arg Leu Leu Asp Leu Gly Ala Pro Gly Ile Ile
            275                 280                 285
Val Gln Asn Glu Lys Arg Met Leu Gln Glu Ala Val Asp Ala Leu Ile
        290                 295                 300
Asp Asn Gly Arg Arg Gly Arg Pro Val Thr Gly Pro Gly Asn Arg Pro
305                 310                 315                 320
Leu Lys Ser Leu Ser His Met Leu Lys Gly Lys Gln Gly Arg Phe Arg
            325                 330                 335
Gln Asn Leu Leu Gly Lys Arg Val Asp Tyr Ser Gly Arg Ser Val Ile
        340                 345                 350
Ala Val Gly Pro Ser Leu Lys Met Tyr Gln Cys Gly Leu Pro Lys Glu
        355                 360                 365
Met Ala Leu Glu Leu Phe Lys Pro Phe Val Met Lys Glu Leu Val Gln
    370                 375                 380
Arg Glu Ile Ala Thr Asn Ile Lys Asn Ala Lys Ser Lys Ile Glu Arg
385                 390                 395                 400
Met Asp Asp Glu Val Trp Asp Val Leu Glu Asp Val Ile Thr Glu His
                405                 410                 415
```

```
Pro Val Leu Leu Asn Arg Ala Pro Thr Leu His Arg Leu Gly Ile Gln
        420                     425                 430
Ala Phe Glu Pro Thr Leu Val Glu Gly Arg Ala Ile Arg Leu His Pro
        435                     440                 445
Leu Val Thr Thr Ala Tyr Asn Ala Asp Phe Asp Gly Asp Gln Met Ala
        450                     455             460
Val His Val Pro Leu Ser Lys Glu Ala Gln Ala Glu Ala Arg Met Leu
465                     470                 475                 480
Met Leu Ala Ala Gln Asn Ile Leu Asn Pro Lys Asp Gly Lys Pro Val
                485                     490                 495
Val Thr Pro Ser Gln Asp Met Val Leu Gly Asn Tyr Tyr Leu Thr Leu
                500                     505                 510
Glu Arg Lys Asp Ala Val Asn Thr Gly Ala Ile Phe Asn Asp Thr Asn
        515                     520                 525
Glu Val Leu Lys Ala Tyr Ala Asn Gly Tyr Val His Leu His Thr Arg
        530                     535                 540
Ile Gly Val His Ala Asn Ser Phe Asn Asn Pro Thr Phe Thr Asp Glu
545                     550                 555                 560
Gln Asn Ser Lys Ile Leu Ala Thr Ser Val Gly Lys Ile Ile Phe Asn
                565                     570                 575
Glu Ile Ile Pro Asp Ser Phe Ala Tyr Ile Asn Glu Pro Ser Gln Ala
                580                     585                 590
Asn Leu Glu Arg Thr Thr Pro Asp Lys Tyr Phe Val Asp Pro Thr Gln
        595                     600                 605
Leu Gly Glu Gly Gly Leu Lys Glu Tyr Phe Asp Asn Ala Glu Leu Ile
        610                     615                 620
Glu Pro Phe Asn Lys Lys Phe Leu Gly Asn Ile Ile Ala Glu Val Phe
625                     630                 635                 640
Asn Arg Phe Ser Ile Thr Asp Thr Ser Met Met Leu Asp Arg Met Lys
                645                     650                 655
Asp Leu Gly Phe Lys Phe Ser Ser Lys Ala Gly Ile Thr Val Gly Val
                660                     665                 670
Ser Asp Ile Val Val Leu Pro Asp Lys Gln Asp Ile Leu Asp Glu His
        675                     680                 685
Glu Lys Leu Val Glu Arg Val Thr Lys Gln Tyr Asn Arg Gly Leu Ile
        690                     695                 700
Thr Glu Asp Glu Arg Tyr Asn Ala Val Val Glu Ile Trp Thr Asp Ala
705                     710                 715                 720
Lys Asp Gln Ile Gln Gly Glu Leu Met Gln Ser Leu Glu Lys Thr Asn
                725                     730                 735
Pro Ile Phe Met Met Ser Asp Ser Gly Ala Arg Gly Asn Ala Ser Asn
                740                     745                 750
Phe Thr Gln Leu Ala Gly Met Arg Gly Leu Met Ala Ala Pro Ser Gly
        755                     760                 765
Lys Ile Ile Glu Leu Pro Ile Thr Ser Ser Phe Arg Glu Gly Leu Thr
        770                     775                 780
Val Leu Glu Tyr Phe Ile Ser Thr His Gly Ala Arg Lys Gly Leu Ala
785                     790                 795                 800
Asp Thr Ala Leu Lys Thr Ala Asp Ser Gly Tyr Leu Thr Arg Arg Leu
                805                     810                 815
Val Asp Val Ala Gln Asp Val Ile Val Arg Glu Glu Asp Cys Gly Thr
                820                     825                 830
Asp Arg Gly Leu Leu Val Ser Asp Ile Lys Glu Gly Thr Glu Met Ile
        835                     840                 845
Glu Pro Phe Ile Glu Arg Ile Glu Gly Arg Tyr Ser Lys Glu Thr Ile
        850                     855                 860
```

```
Arg His Pro Glu Thr Asp Glu Val Ile Ile Arg Pro Asp Glu Leu Ile
865                 870             875                 880
Thr Pro Asp Ile Ala Lys Gln Ile Thr Asp Ala Gly Ile Glu Gln Met
                885             890             895
Tyr Ile Arg Ser Ala Phe Thr Cys Asn Thr Arg His Gly Val Cys Glu
            900             905             910
Lys Cys Tyr Gly Lys Asn Leu Ala Thr Gly Glu Lys Val Glu Val Gly
            915             920             925
Glu Ala Val Gly Thr Ile Ala Ala Gln Ser Ile Gly Glu Pro Gly Thr
        930             935             940
Gln Leu Thr Met Arg Thr Phe His Thr Gly Gly Val Ala Gly Ser Asp
945             950             955             960
Ile Thr Gln Gly Leu Pro Arg Ile Gln Glu Ile Phe Glu Ala Arg Asn
            965             970             975
Pro Lys Gly Gln Ala Val Ile Thr Glu Ile Glu Gly Val Val Asp Asp
            980             985             990
Ile Lys Leu Ala Lys Asp Arg Gln Gln Glu Ile Ile Val Lys Gly Ala
            995             1000            1005
Asn Glu Thr Arg Ser Tyr Leu Ala Ser Gly Thr Ser Arg Leu Lys Val
        1010            1015            1020
Glu Ile Gly Gln Ser Val Glu Arg Gly Glu Val Leu Thr Glu Gly Ser
1025            1030            1035            1040
Ile Glu Pro Lys Asn Tyr Leu Ser Val Ala Gly Leu Asn Ala Thr Glu
            1045            1050            1055
Ser Tyr Leu Leu Lys Glu Val Gln Lys Val Tyr Arg Met Gln Gly Val
            1060            1065            1070
Glu Ile Asp Asp Lys His Val Glu Val Met Val Arg Gln Met Leu Arg
            1075            1080            1085
Lys Val Arg Ile Ile Glu Ala Gly Asp Thr Lys Leu Leu Pro Gly Ser
            1090            1095            1100
Leu Val Asp Ile His Asn Phe Thr Asp Ala Asn Arg Asp Ala Phe Lys
1105            1110            1115            1120
His Arg Lys Arg Pro Ala Thr Ala Lys Pro Val Leu Leu Gly Ile Thr
            1125            1130            1135
Lys Ala Ser Leu Glu Thr Glu Ser Phe Leu Ser Ala Ala Ser Phe Gln
            1140            1145            1150
Glu Thr Thr Arg Val Leu Thr Asp Ala Ala Ile Lys Gly Lys Arg Asp
            1155            1160            1165
Asp Leu Leu Gly Leu Lys Glu Asn Val Ile Ile Gly Lys Leu Ile Pro
        1170            1175            1180
Ala Gly Thr Gly Met Arg Arg Tyr Ser Asp Ile Gln Tyr Asp Lys Ala
1185            1190            1195            1200
Thr Ala Pro Val Thr Glu Thr Ser Glu Glu Val Glu Thr Ile Glu
            1205            1210            1215
```

<210> 5317
<211> 218
<212> PRT
<213> S.epidermidis

<400> 5317

```
Lys Arg Met Lys Trp Ser Glu Val Phe His Asp Ile Thr Thr Arg His
1           5               10                  15
Asp Phe Gln Ala Met His Asp Phe Leu Glu Lys Glu Tyr Thr Thr Gln
        20              25              30
Thr Val Tyr Pro Asp Lys Gln Asn Ile Tyr Gln Ala Phe Asp Leu Thr
```

```
              35                      40                      45
Pro Phe Glu Asp Ile Lys Val Val Ile Leu Gly Gln Asp Pro Tyr His
       50                      55                      60
Gly Pro Asn Gln Ala His Gly Leu Ala Phe Ser Val Gln Pro His Ala
65                      70                      75                      80
Lys Phe Pro Pro Ser Leu Arg Asn Met Tyr Gln Glu Leu Glu Asn Asp
                   85                      90                      95
Ile Gly Cys His Arg Thr Ser Pro His Leu Gln Asp Trp Ala Arg Glu
               100                     105                     110
Gly Val Leu Leu Leu Asn Thr Val Leu Thr Val Arg Gln Gly Glu Ala
           115                     120                     125
His Ser His Arg Asn Ile Gly Trp Glu Thr Phe Thr Asp Glu Ile Ile
       130                     135                     140
Gln Ala Val Ser Asn Tyr Arg Glu His Val Val Phe Ile Leu Trp Gly
145                     150                     155                     160
Arg Pro Ala Gln Gln Lys Glu Arg Phe Ile Asp Thr Ser Lys His Leu
                   165                     170                     175
Ile Ile Lys Ser Pro His Pro Ser Pro Leu Ser Ala Phe Arg Gly Phe
               180                     185                     190
Phe Gly Ser Lys Pro Tyr Ser Thr Thr Asn Asn Tyr Leu Lys Ser Lys
           195                     200                     205
Gly Lys Thr Pro Val Gln Trp Cys Glu Ser
       210                     215
```

<210> 5318
<211> 75
<212> PRT
<213> S.epidermidis

<400> 5318
```
Thr Met Met Lys Met Thr Thr Ser Thr Leu Glu Leu Ser Ser Thr Ile
1                   5                   10                      15
Asn Gln Arg Tyr Lys Tyr Asn Thr Gln Gly Lys Thr Pro Thr Gln Ile
               20                      25                      30
Gln Gln Glu Leu Arg Gln Ile Gly Val Lys Gly Phe Val Val Lys Val
           35                      40                      45
Ala Gly Ser Arg Val Thr Met Lys Val Glu Lys Glu Asn Ile Arg Lys
       50                      55                      60
Asn Arg Glu Cys Met Arg Asn Gly Arg Ser Asn
65                      70                      75
```

<210> 5319
<211> 460
<212> PRT
<213> S.epidermidis

<400> 5319
```
Gly Val Met Asn Tyr Glu Arg Ser Tyr Leu Arg Ser Cys Gln Val Arg
1                   5                   10                      15
Thr Leu Glu Gln Lys Glu Val Gly Tyr Ser Ile Glu Glu Gln Glu Arg
               20                      25                      30
Lys Leu Lys Ser Phe Cys Glu Ile Asn Asp Trp Ser Val Ser Asp Val
           35                      40                      45
Phe Ile Asp Ala Gly Phe Ser Gly Ala Lys Arg Asp Arg Pro Glu Leu
       50                      55                      60
Gln Arg Met Met Asn Asp Ile Lys Arg Phe Asp Leu Val Leu Val Tyr
```

```
65                          70                          75                          80
Lys Leu Asp Arg Leu Thr Arg Asn Val Arg Asp Leu Leu Asp Leu Leu
                85                          90                          95
Glu Val Phe Glu Gln Asn Asn Val Ala Phe Arg Ser Ala Thr Glu Val
            100                         105                     110
Tyr Asp Thr Ser Thr Ala Met Gly Arg Leu Phe Val Thr Leu Val Gly
        115                     120                     125
Ala Met Ala Glu Trp Glu Arg Glu Thr Ile Arg Glu Arg Val Met Met
    130                     135                     140
Gly Lys Arg Ala Ala Ile Lys Gln Gly Met Ile Leu Thr Pro Pro Pro
145                     150                     155                     160
Phe Tyr Tyr Asp Arg Val Asp Asn Thr Tyr Ile Pro Asn Asp Tyr Lys
                165                     170                     175
Lys Val Val Leu Trp Ala Tyr Asp Glu Val Met Lys Gly Asn Ser Ser
            180                     185                     190
Lys Ala Ile Ala Arg Lys Leu Asn Asp Ser Asp Ile Pro Pro Pro Asn
        195                     200                     205
Gly Lys Arg Trp Glu Asp Arg Thr Ile Thr Arg Ala Leu Arg Asn Pro
        210                     215                     220
Ile Thr Arg Gly His Tyr Thr Trp Gly Asp Val Phe Ile Glu Asn Ser
225                     230                     235                     240
His Glu Pro Ile Ile Thr Glu Glu Met Tyr Gln Gln Ile Lys Glu Arg
                245                     250                     255
Leu Glu Glu Arg Ile Asn Thr Lys Ile Val Ser His Val Ser Val Phe
            260                     265                     270
Arg Gly Lys Phe Ile Cys Pro Arg Cys Gly Gly Thr Leu Thr Met Asn
            275                     280                     285
Thr Ala Thr Arg Lys Arg Lys Lys Gly Tyr Val Thr Tyr Lys Thr Tyr
            290                     295                     300
Tyr Cys Asn Thr Cys Lys Thr Lys Lys Gln Ser Phe Gly Phe Ser Glu
305                     310                     315                     320
Asn Glu Ala Leu Arg Val Phe Arg Asp Tyr Leu Ser Lys Leu Asp Leu
                325                     330                     335
Asp Lys Tyr Glu Val Lys Thr Lys Gln Lys Asp Asp Val Val Thr Ile
            340                     345                     350
Asp Ile Asp Lys Ile Met Glu Gln Arg Lys Arg Tyr His Lys Leu Tyr
            355                     360                     365
Ala Lys Gly Leu Met Gln Glu Glu Leu Phe Glu Leu Ile Lys Glu
    370                     375                     380
Thr Asp Glu Thr Ile Ala Glu Tyr Glu Lys Gln Lys Glu Leu Val Pro
385                     390                     395                     400
Arg Lys Ser Leu Asp Ile Asp Lys Ile Lys Lys Phe Lys Asn Ala Leu
                405                     410                     415
Leu Glu Ser Trp Lys Ile Phe Ser Leu Glu Asp Lys Ala Asp Phe Ile
            420                     425                     430
Lys Met Ala Ile Lys Ser Ile Asp Ile Asp Tyr Val Lys Leu Lys Asn
        435                     440                     445
Arg His Ser Ile Lys Ile Asn Asp Ile Glu Phe Tyr
    450                     455                     460
```

<210> 5320
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5320

Ile Ile Val Lys Lys Val Pro Leu Asn Cys Glu Asn Cys Gly Asn Arg
1   5   10   15
Asn Tyr Asn Val Pro Lys Lys Glu Gly Ser Ala Thr Arg Leu Thr Leu
            20   25   30
Lys Lys Tyr Cys Pro Arg Cys Asn Ala His Thr Val His Lys Glu Ser
        35   40   45
Lys

<210> 5321
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5321
Arg Lys Val Lys Phe Met Ile Thr Val Leu Val Ile Thr Ile Phe Phe
1   5   10   15
Ile Thr Val Thr Leu Ile Ile Trp Gln Pro Lys Gly Leu Asp Ile Gly
            20   25   30
Ile Ser Ala Val Ile Gly Ala Leu Leu Ala Ile Val Thr Gly Val Val
        35   40   45
Ser Val Ser Asp Ile Leu Glu Val Thr Ser Ile Val
    50   55   60

<210> 5322
<211> 286
<212> PRT
<213> S.epidermidis

<400> 5322
Lys Ile Lys Asn Asn Lys Trp Arg Met Glu Thr Met Thr Glu Leu Asn
1   5   10   15
Thr Lys Glu Met Lys Leu Asp Ala Leu Leu Lys Asp Met Gln Ser Val
            20   25   30
Val Ile Ala Phe Ser Gly Gly Val Asp Ser Ser Leu Leu Leu Lys Lys
        35   40   45
Ala Ile Asp Ile Leu Gly Val Asn Tyr Val Lys Pro Val Val Val Lys
    50   55   60
Ser Glu Leu Phe Arg Asn Glu Glu Phe Glu Leu Ala Leu Lys Leu Gly
65   70   75   80
Gln Ser Leu Gly Val Glu Val Leu Glu Thr Glu Met Ser Glu Leu Gln
                85   90   95
Asp Ala Asn Ile Val Lys Asn Thr Pro Glu Ser Trp Tyr Tyr Ser Lys
            100   105   110
Arg Leu Met Tyr Ser Gln Leu Glu Asn Ile Lys Asn Lys Leu Gly Phe
        115   120   125
Asn Tyr Val Leu Asp Gly Met Ile Met Asp Asp Leu Asp Asp Phe Arg
    130   135   140
Pro Gly Leu Lys Ala Arg Asp Asp Phe Gly Val Arg Ser Val Leu Gln
145   150   155   160
Glu Ala Lys Leu Tyr Lys Ser Glu Val Arg Glu Leu Ser His Gln His
                165   170   175
Asp Leu Pro Val Trp Asn Lys Pro Ala Leu Cys Ser Leu Ala Ser Arg
            180   185   190
Ile Pro Tyr Gly Glu Glu Leu Ser Phe Thr Lys Val Asn Lys Val Asn
        195   200   205

Glu Ala Glu Lys Phe Ile Leu Ser Leu Gly Ile Asn His Val Arg Val
    210   215   220
Arg Tyr His His Asn Ile Ala Arg Ile Glu Val Thr Glu Asp Gln Leu
225   230   235   240
Asn Asn Leu Leu Lys Leu Lys Asp Ser Ile Ile Leu His Leu Lys Glu
                245   250   255
Leu Gly Phe Asp Tyr Val Thr Met Asp Leu Glu Gly Tyr Arg Thr Gly
                260   265   270
Ser Met Asn Glu Ile Ile Asp Thr Lys Ser Thr Ser Phe Lys
        275   280   285

<210> 5323
<211> 164
<212> PRT
<213> S.epidermidis

<400> 5323
Lys Lys Glu Lys Cys Arg Met Lys Glu Pro Pro His Asn Arg Leu Thr
1   5   10   15
Phe Lys Glu Ser Met Thr Glu Gly Lys Tyr Leu Thr Thr Ile Thr Lys
                20   25   30
Glu Asp Lys Ile Arg Tyr Lys Lys Leu Ser Val Glu Glu Lys Arg Lys
        35   40   45
Val Leu Asn Asp Phe Asn Ala Ser Thr Pro Gln Lys Asp Asp Lys Val
    50   55   60
Ser Leu Phe Asp Tyr Met Lys Arg Thr Met Leu Lys His Gly Leu Asp
65   70   75   80
Glu Val Thr Ser Ile Thr Glu Asn Ala Val Leu Lys Asn Glu Pro Gly
                85   90   95
Lys His Ile Asp Ser Phe Met Thr Arg Leu Ser Ser Phe Ser Thr Thr
            100   105   110
Lys Asp Gly Thr Thr Val Phe Thr Tyr Glu Leu Ile Asn Gln Asn Phe
            115   120   125
Val Val Ile Lys Ile Leu Asp Glu Gln Leu Lys Gln Asn Lys Lys Ile
    130   135   140
Ile Glu Gln Asn Asn Glu Ile Ile Ser Leu Leu Lys Gln Ile Ala Asn
145   150   155   160
Arg Gly Glu Met

<210> 5324
<211> 300
<212> PRT
<213> S.epidermidis

<400> 5324
Asn Lys Trp Lys Arg Gly Gln Leu Met Ile Lys Leu Ile Ala Thr Asp
1   5   10   15
Met Asp Gly Thr Leu Leu Asn Ala Gly His Glu Ile Thr Thr Met Asn
                20   25   30
Gln Glu Ala Ile Lys Phe Ala Gln Ala Asn Gly Ile Thr Val Val Ile
            35   40   45
Ala Thr Gly Arg Ala Phe Tyr Glu Ala Gln Thr Pro Val Ala Glu Thr
        50   55   60
Asp Leu Lys Val Pro Tyr Ile Cys Leu Asn Gly Ala Glu Val Arg Asp
65   70   75   80

```
Glu Ser Phe Asn Ile Met Ser Thr Ser His Leu Asn His Asp Leu Val
                85                  90                  95
His Lys Ile Thr Thr Ala Leu Lys Asn Asn His Ile Tyr Tyr Gln Ile
            100                 105                 110
Tyr Thr Asn Arg Gly Ile Tyr Thr Glu Asp Pro Lys Arg Asp Leu Ala
            115                 120                 125
Ile Tyr Ile Asp Ile Ala Glu Arg Ala Gly Gln Lys Ala Asp Val Asp
        130                 135                 140
Lys Ile Arg Asn Asn Ile Gln Lys Arg Ile Asp Asn Gly Thr Leu Lys
145                 150                 155                 160
Val Val Asp Asn Tyr Asp Ser Ile Glu Asp Ile Pro Gly Glu Leu Ile
                165                 170                 175
Met Lys Val Leu Ala Phe Asp Ala Asp Leu Ser Lys Ile Asp Gln Val
            180                 185                 190
Gly Gln Ala Leu Ala Ser Ser Pro Asn Leu Ala Val Ser Ser Ser Ser
            195                 200                 205
Arg Gly Asn Leu Glu Ile Thr His Ser Asn Ala Gln Lys Gly Ile Ala
        210                 215                 220
Leu Ser Ala Ile Ala His Gln Leu Gly Ile Asp Leu Thr Asp Val Ile
225                 230                 235                 240
Ala Ile Gly Asp Asn Leu Asn Asp Ile Ser Met Leu Glu Arg Val Gly
                245                 250                 255
Tyr Pro Val Ala Met Asn Asn Ala Thr Asp Glu Val Lys His Ile Ala
            260                 265                 270
Lys Tyr Val Thr Asp Thr Asn Glu Asn Ser Gly Val Gly Lys Ala Ile
            275                 280                 285
Met Lys Ile Leu Lys Glu Glu Asn Asn Leu Glu Val
    290                 295                 300
```

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<210> 5325
<211> 42
<212> PRT
<213> S.epidermidis
```

```
<400> 5325
Leu Arg Trp Lys Ile Leu Lys Thr Leu Val Lys Asn Leu Thr Met Phe
 1               5                  10                  15
Thr Lys Leu Ser Phe Lys Val Asn Ile Phe His Asp Phe Asp Asn Ser
            20                  25                  30
Leu Lys Glu Phe Tyr Asn Ile Lys Val Leu
        35                  40
```

```
<210> 5326
<211> 43
<212> PRT
<213> S.epidermidis
```

```
<400> 5326
Asn Gln Phe Glu Ile Phe His Leu Asn Ile Val Pro Lys Phe Val Arg
1               5                  10                  15
Tyr Val Ser His Glu Thr Leu Ile Leu Thr Lys Ile Ile Tyr Lys Ile
            20                  25                  30
Ser Val Asn Lys Phe Arg Lys Asn Asn Ser Ser
        35                  40
```

```
<210> 5327
```

<211> 48
<212> PRT
<213> S.epidermidis

<400> 5327
Leu Ser Ser Asp Glu Pro Leu Pro Leu Pro Leu Leu Pro Gln Ala Leu
1   5   10   15
Ser Thr Met Ala Lys Ala Ser Val Ala Ser Ser Pro Lys Asn Phe Glu
            20   25   30
Leu Arg Arg Phe Asn Ile Thr Cys Phe Pro Leu Phe Asn Ile Ser Leu
        35   40   45

<210> 5328
<211> 165
<212> PRT
<213> S.epidermidis

<400> 5328
Arg Met Thr Glu Asn Thr Ile Asn Pro Ile Thr Thr Leu Glu Phe Asn
1   5   10   15
Gly Glu Glu Val Glu Ala Lys Ala Thr Phe Leu Phe Asp Lys Thr Ala
            20   25   30
Lys Lys Phe Ala Lys Asp Glu Gln Asp Lys Asn Gly Lys Thr Thr Lys
        35   40   45
Val Ser Gly Phe Asn Ala Ile Tyr Asn Gly Ile Leu Glu Arg Asp Thr
    50   55   60
Asn Ala Ile Ala Asp Phe Trp Glu Cys Ala Thr Ala Tyr Leu Asn Lys
65   70   75   80
Lys Ala Pro Thr Arg Glu Gln Ile Glu Thr Ser Leu Met Gln Phe Ile
                85   90   95
Asp Lys Asn Gly Asp Thr Leu Glu Leu Leu Gln Gly Ala Leu Asp Val
            100   105   110
Met Asn Asn Ser Gly Phe Phe Lys Gln Lys Ser Arg Gln Phe Trp Thr
        115   120   125
Gln Met Asn Ile Ala Pro Ser Met Ala Lys Glu Glu Glu Lys Glu Ser
    130   135   140
Thr Lys Asn Gly Ile Glu Phe Met Lys Asn Asn Tyr Lys Glu Ile Met
145   150   155   160
Gly Glu Leu Pro Tyr
                165

<210> 5329
<211> 86
<212> PRT
<213> S.epidermidis

<400> 5329
Met Ser Asn Glu Lys Val Ala Arg Phe Asn Lys Gln Gln Tyr Val Val
1   5   10   15
Gly Leu Lys Glu Thr Leu Lys Ala Leu Lys Lys Gly Gln Val Thr Ser
            20   25   30
Leu Ile Ile Ala Gln Asp Val Glu Val His Leu Leu Thr Arg Val Leu
        35   40   45
Ser Tyr Ile Asn His Lys Asn Ile Pro Val Ser Phe Phe Ser Ser Gln
    50   55   60
Arg Ala Leu Gly Lys Tyr Val Gly Ile Asn Val Asn Ala Thr Ile Val

```
65                    70                  75                      80
Ala Leu Ile Ser Glu Asn
                 85


<210> 5330
<211> 406
<212> PRT
<213> S.epidermidis


<400> 5330
Asn Asn Asn Asp Ile Leu Ile Ser Ile Ile Lys Met Glu Glu Val Ile
1               5                  10                      15
His Val Phe Asp Trp Phe Gln Leu Ala Ser Asn Lys Glu Lys Arg Met
            20                  25                  30
Val Gln Leu Arg Arg Tyr Leu His Gln Tyr Pro Glu Leu Ser Phe Glu
        35                  40                  45
Glu Lys Arg Thr His Asp Phe Ile Val Asn Gln Leu Ser Gln Leu Ala
    50                  55                  60
Cys Thr Ile Glu Thr Pro Val Gly Arg Asn Gly Ile Lys Ala Thr Phe
65                  70                  75                      80
Lys Gly Ser Asp Ser Asn Gly Pro Thr Ile Ala Leu Arg Ala Asp Phe
                85                  90                  95
Asp Ala Leu Pro Val Gln Glu Leu Asn Asp Val Pro Tyr Arg Ser Lys
            100                 105                 110
Asn Lys Gly Cys Met His Ala Cys Gly His Asp Gly His Thr Ala Ile
            115                 120                 125
Leu Leu Gly Val Ala Glu Ile Val His Glu His Arg His Leu Leu Lys
    130                 135                 140
Gly Asn Val Val Phe Ile Phe Gln Tyr Gly Glu Glu Ile Met Pro Gly
145                 150                 155                     160
Gly Ser Gln Glu Met Ile Asp Asp Gly Cys Leu Gln Asn Val Asp Lys
                165                 170                 175
Ile Tyr Gly Thr His Leu Trp Ser Gly Tyr Pro Ser Gly Thr Ile Tyr
            180                 185                 190
Ser Arg Pro Gly Ala Ile Met Ala Ser Pro Asp Glu Phe Ser Val Thr
            195                 200                 205
Ile Tyr Gly Lys Gly Gly His Gly Ala Lys Pro His Glu Thr Ile Asp
    210                 215                 220
Pro Ile Val Ile Met Ala Glu Phe Ile Leu Ser Ala Gln Lys Ile Ile
225                 230                 235  ·                  240
Ser Arg Thr Ile Asp Pro Val Lys Glu Ala Val Leu Thr Phe Gly Met
                245                 250                 255
Ile Gln Ala Gly Ser Thr Asp Ser Val Ile Pro Asp Thr Ala Phe Cys
            260                 265                 270
Lys Gly Thr Val Arg Thr Phe Asp Thr Lys Leu Gln Ser His Val Gln
            275                 280                 285
Asn Lys Met Asp Lys Leu Leu Gln Gly Leu Ser Leu Ser Asn Asp Ile
    290                 295                 300
Thr Tyr Glu Leu Glu Tyr Ile Lys Gly Tyr Leu Pro Val His Asn His
305                 310                 315                     320
Gln Gln Ser Tyr Asp Val Val Lys Gln Ala Ala Asn Asp Leu His Leu
            325                 330                 335
Arg Phe Asn Glu Ser Asp Leu Met Met Ile Gly Glu Asp Phe Ser His
            340                 345                 350
Tyr Leu Lys Val Arg Pro Gly Ala Phe Phe Leu Thr Gly Cys Gly Asn
    355                 360                 365
```

Lys Asp Lys Gly Ile Thr Ala Pro His His Asn Pro His Phe Asp Ile
    370   375   380
Asp Glu Ser Ser Leu Lys Tyr Ala Ala Ser Glu Phe Leu Lys Ile Leu
385   390   395   400
Glu Ile Glu Asn Val Phe
            405

<210> 5331
<211> 165
<212> PRT
<213> S.epidermidis

<400> 5331
Lys Asn Ser Asp Phe Gly Lys Ser Val Asp Trp Ala Ile Gln Gly Thr
1   5   10   15
Asp Ala Arg Asn Gly Val Met Gln Glu Thr Lys Asp Glu Leu Asp Ser
            20   25   30
Asp Asn Leu Asp Lys Tyr Ser Leu Lys Glu Ser Ala Asp Gln Asp Gln
        35   40   45
Phe Lys Lys Ile Gln Ser Ala Phe Lys Gln Gln Glu Pro Ile Val Phe
    50   55   60
Thr Ala Met Glu Pro Ser Trp Phe Ser Lys Glu Leu Asp Val Lys Met
65   70   75   80
Leu Lys Asp Pro Asp Asn Ile Tyr Gly Asn Asn Asn Gln His Ile Asp
            85   90   95
Leu Val Phe Asn Lys Asp Phe Lys Glu Ala His Pro Ala Ala Tyr Thr
            100   105   110
Val Ala Thr Arg Met Ala Asp Asp Trp Ser Lys Ser Asp Glu Asp Lys
        115   120   125
Leu Ala Lys Lys Ile Phe Val Asp Asn Lys Asn Pro Glu Gln Val Ala
        130   135   140
Lys Asp Tyr Val Asp Asp Asn Asp Asn Lys Val Asp Glu Trp Leu Glu
145   150   155   160
Gly Ile Glu Thr Ile
            165

<210> 5332
<211> 187
<212> PRT
<213> S.epidermidis

<400> 5332
Val Arg Ser Glu Asp Met Ser Glu Glu Val Gly Ala Lys Arg Trp Tyr
1   5   10   15
Ala Val His Thr Tyr Ser Gly Tyr Glu Asn Lys Val Lys Lys Asn Leu
            20   25   30
Glu Lys Arg Val Glu Ser Met Asn Met Thr Glu Gln Ile Phe Arg Val
        35   40   45
Val Ile Pro Glu Glu Glu Glu Thr Gln Val Lys Asp Gly Lys Ala Lys
        50   55   60
Lys Leu Val Lys Lys Thr Phe Pro Gly Tyr Val Leu Val Glu Leu Ile
65   70   75   80
Met Thr Asp Glu Ser Trp Tyr Val Val Arg Asn Thr Pro Gly Val Thr
            85   90   95
Gly Phe Val Gly Ser Ala Gly Ala Gly Ser Lys Pro Asn Pro Leu Leu
            100   105   110

```
Pro Glu Glu Val Arg Phe Ile Leu Lys Gln Met Gly Leu Lys Glu Lys
        115                 120                 125
Thr Ile Asp Val Glu Leu Asp Val Gly Glu Gln Val Arg Ile Gln Ser
        130                 135                 140
Gly Pro Phe Ala Asn Gln Ile Gly Glu Val Gln Glu Ile Glu Ala Asp
145                 150                 155                 160
Lys Phe Lys Leu Thr Val Leu Val Asp Met Phe Gly Arg Glu Thr Pro
                165                 170                 175
Val Glu Val Glu Phe Asp Gln Ile Glu Lys Leu
            180                 185
```

<210> 5333
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5333
```
Gln Leu Asn Glu Leu Lys Ile Ile Lys Lys Asn Tyr Lys Lys Asp Asn
1               5                   10                  15
Phe Tyr Ile Ile Ser Ile Glu Ile Val Phe Phe Tyr Leu Ser Trp Thr
            20                  25                  30
Phe Leu Phe Gln Pro Leu Tyr Lys Ile Val Thr Lys
        35                  40
```

<210> 5334
<211> 120
<212> PRT
<213> S.epidermidis

<400> 5334
```
Asn His Leu Asp Val Tyr Val Gly Leu Val Ile Met Phe Asn Pro Leu
1               5                   10                  15
Asp Glu Phe Pro His Thr Ile Glu Leu Gly Ser Arg Glu Val Val Gly
            20                  25                  30
Glu Tyr Pro Arg Glu Gln Glu Arg Phe Lys Ser Glu Lys Thr Ile Gln
        35                  40                  45
Gly Phe Met Asp Thr Pro Thr Ser Ser Glu Gln Leu Lys Phe His Gln
    50                  55                  60
Met Asn Gln Ser Tyr Asp Arg Asn Leu Tyr Thr Pro Tyr Ser Leu Pro
65                  70                  75                  80
Ile Thr Asn Thr Asn Leu Phe Lys Tyr Asn Gly Lys Thr Tyr Glu Val
                85                  90                  95
Val Gly Glu Pro Val Asp Gln Gly Gly Gln Gln Glu Ile Asn Leu Thr
            100                 105                 110
Arg Leu Lys Glu Cys Pro Ile Gly
        115                 120
```

<210> 5335
<211> 69
<212> PRT
<213> S.epidermidis

<400> 5335
```
Lys Val Ile Glu Cys Gly Gly Leu Met Met Ala Lys Lys Glu Ser Phe
1               5                   10                  15
Phe Lys Gly Val Lys Ser Glu Met Glu Lys Thr Ser Trp Pro Thr Lys
```

```
                    20                      25                      30
Glu Glu Leu Phe Lys Tyr Thr Ile Ile Val Val Ser Thr Val Ile Phe
        35                      40                      45
Phe Leu Val Phe Phe Tyr Ala Leu Asp Ile Gly Ile Asn Ala Leu Lys
        50                      55                      60
Gln Leu Phe Leu Gly
65
```

<210> 5336
<211> 293
<212> PRT
<213> S.epidermidis

<400> 5336

```
Asn Met Thr Glu Phe Asp Leu Ser Thr Arg Glu Gly Arg Trp Lys His
1               5                   10                      15
Phe Gly Ser Val Asp Pro Val Lys Gly Thr Lys Pro Thr Thr Lys Asn
                20                      25                      30
Glu Met Thr Asp Leu Gln Ser Thr His Lys Asn Phe Leu Phe Glu Ile
        35                      40                      45
Glu Glu Val Gly Ile Lys Asn Leu Thr Tyr Pro Val Leu Ile Asp Gln
        50                      55                      60
Tyr Gln Thr Ala Gly Leu Phe Ser Phe Ser Thr Ser Leu Asn Lys Asn
65                      70                      75                      80
Glu Lys Gly Ile Asn Met Ser Arg Ile Leu Glu Ser Val Glu Lys His
                85                      90                      95
Tyr Asp Asn Gly Ile Glu Leu Glu Phe Asn Thr Leu His Gln Leu Leu
                100                     105                     110
Arg Thr Leu Gln Asp Lys Met Asn Gln Asn Ala Ala Gly Val Asp Val
        115                     120                     125
Ser Gly Lys Trp Phe Phe Asp Arg Tyr Ser Pro Val Thr Asn Ile Lys
        130                     135                     140
Ala Val Gly His Ala Asp Val Thr Tyr Gly Leu Ala Ile Glu Asn His
145                     150                     155                     160
Thr Val Thr Arg Lys Glu Leu Thr Ile Gln Ala Lys Val Thr Thr Leu
                165                     170                     175
Cys Pro Cys Ser Lys Glu Ile Ser Glu Tyr Ser Ala His Asn Gln Arg
            180                     185                     190
Gly Ile Val Thr Val Lys Ala Tyr Leu Asp Lys Asn Asn Asp Val Ile
            195                     200                     205
Asp Asp Tyr Lys Asp Lys Ile Leu Asp Ala Met Glu Ala Asn Ala Ser
    210                     215                     220
Ser Ile Leu Tyr Pro Ile Leu Lys Arg Pro Asp Glu Lys Arg Val Thr
225                     230                     235                     240
Glu Arg Ala Tyr Glu Asn Pro Arg Phe Val Glu Asp Leu Ile Arg Leu
                245                     250                     255
Ile Ala Ala Asp Leu Val Glu Phe Asp Trp Ile Glu Gly Phe Asp Ile
            260                     265                     270
Glu Cys Arg Asn Glu Glu Ser Ile His Gln His Asp Ala Phe Ala Arg
            275                     280                     285
Leu Lys Tyr Arg Lys
        290
```

<210> 5337
<211> 109
<212> PRT

<213> S.epidermidis

<400> 5337
Gly Met Ala Glu Val Thr Lys Glu Gln Leu Leu Glu Phe Ile Arg Asn
1   5   10   15
Asn Glu Leu Asp Leu Asp Glu Ser Tyr Pro Arg Ser Asp Trp Trp Lys
            20   25   30
Phe Arg Asn Glu Arg Asp Ser Leu Arg Lys Gln Arg Asp Glu Leu Ile
        35   40   45
Asn Asp Met Ala Glu Thr Lys Arg Lys Ala Glu Ala Phe Asp Glu Ile
    50   55   60
Val Lys Val Leu Ala Ser Ile Ser Lys Glu Ile Val Glu Tyr Pro Gly
65   70   75   80
Asp Asn Asp Lys Gln Lys Glu Val Ile Tyr Lys Arg Tyr Asp Asp Leu
                85   90   95
Phe Glu Pro Met Lys Leu Leu Glu Val Asn Asp Glu Arg
            100   105

<210> 5338
<211> 83
<212> PRT
<213> S.epidermidis

<400> 5338
Phe Leu Gln Glu Asn Ala Glu Val Leu Trp Met Lys Val Tyr Glu Tyr
1   5   10   15
Gln Gln Leu Leu Gly Phe Met Tyr Arg Glu Asp Tyr Lys Glu Asp Pro
            20   25   30
Ile Ile Ala Lys Ile Leu Ile Glu Ser Gly Trp Ala Val Lys Arg Leu
        35   40   45
Leu Asp Thr Gly Thr Ile Lys Pro Phe Asp Asp Tyr Glu Glu Val Lys
    50   55   60
Glu Leu Ile Met Asn Glu Thr Lys Trp Arg Gln Pro Asp Gly Thr Tyr
65   70   75   80
Arg Arg Thr

<210> 5339
<211> 183
<212> PRT
<213> S.epidermidis

<400> 5339
Met Thr Lys Glu Leu Glu Ile Lys Leu Leu Thr Glu Asn Ala Thr Met
1   5   10   15
Pro Lys Arg Asp Arg Leu Asp Ala Gly Tyr Asp Ile Tyr Ser Ala Glu
            20   25   30
Thr Val Ile Leu Glu Pro Gln Glu Lys Ala Thr Ile Arg Thr Asp Ile
        35   40   45
Ala Val Asn Ile Pro Glu Gly Tyr Val Gly Leu Leu Thr Ser Arg Ser
    50   55   60
Gly Val Ser Ser Lys Thr His Leu Val Ile Glu Thr Gly Lys Ile Asp
65   70   75   80
Ala Gly Phe Gln Gly Asn Met Lys Ile Asn Ile Lys Asn Asp Ile Glu
                85   90   95
Val Val Asp Ala Asp Glu Phe Ile Tyr Lys Asp Ile Lys Asn Glu Ile

```
            100                    105                    110
Ile Asp Asp Gly Ser Phe Asn Glu Pro Ile Glu Glu Gln Ser Ser Asn
        115                    120                    125
Pro Leu Asp Ile Phe Lys Pro Arg Asn Thr Ser Tyr Val Ile Lys Lys
    130                    135                    140
Gly Asp Lys Leu Ala Gln Leu Val Ile Val Pro Ile Trp Thr Pro Glu
145                    150                    155                    160
Leu Lys Glu Ile Glu Glu Phe Ser Ser Gly Ser Glu Arg Gly Glu Gln
                   165                    170                    175
Gly Phe Gly Ser Thr Gly Phe
            180
```

```
<210> 5340
<211> 83
<212> PRT
<213> S.epidermidis
```

```
<400> 5340
Thr Met Lys Asp Lys Asp Tyr Lys Ser Leu Trp Ile Lys Leu Lys Glu
1                5                   10                   15
Lys Lys Leu Lys Glu Tyr Val Glu Val His Arg Ser Val Asn Gln Ile
            20                   25                   30
Ile Thr Pro Tyr Asn Gln Tyr His Leu Phe Glu Ile Ala Asn Glu Met
        35                   40                   45
Val Ser Glu Asn Glu Leu Lys Arg Asp Leu Lys Tyr Met Asp Gln Leu
    50                   55                   60
Asp Gly Thr His Glu Phe Gln Asn Leu Leu Ser Asp Leu Glu Ala Cys
65                   70                   75                   80
Asn Gly Gln
```

```
<210> 5341
<211> 208
<212> PRT
<213> S.epidermidis
```

```
<400> 5341
Met Thr Glu Glu Thr Leu Phe Asn Gln Leu Asn Gln Lys Asp Val Asn
1                5                   10                   15
Asp His Val Glu Lys Lys Asn Gly Leu Thr Tyr Leu Ala Trp Ser Tyr
            20                   25                   30
Ala His Gln Glu Leu Lys Lys Ile Asp Ser Asn Tyr Ser Ile Lys Thr
        35                   40                   45
His Glu Phe Val His Pro Asp Val Pro Leu Asp Asn Tyr Phe Val Pro
    50                   55                   60
Tyr Leu Ala Thr Pro Glu Gly Tyr Phe Val Gln Val Ser Val Thr Val
65                   70                   75                   80
Lys Gly Gln Thr Glu Thr Glu Trp Leu Pro Val Leu Asp Phe Arg Asn
            85                   90                   95
Lys Ser Leu Ala Lys Gly Ser Ala Thr Thr Phe Asp Ile Asn Lys Ala
            100                    105                    110
Gln Lys Arg Cys Phe Val Lys Ala Ala Ala Leu His Gly Leu Gly Leu
        115                    120                    125
Tyr Ile Tyr Asn Gly Glu Glu Val Pro Ser Ala Asn Asp Asn Asp Ile
    130                    135                    140
Thr Glu Leu Glu Glu Arg Ile Asn Gln Phe Val Thr Leu Ser Gln Glu
```

```
145                   150                   155                   160
Lys Gly Arg Asp Ala Thr Leu Asp Lys Thr Met Arg Trp Leu Gly Ile
                165                   170                   175
Gln Asn Ile Asn Lys Val Thr Lys Lys Asp Ile Ala Asn Ala His Gln
                180                   185                   190
Lys Leu Asp Ala Gly Leu Lys Gln Leu Asp Lys Glu Asn Ser Asn Asp
            195                   200                   205
```

<210> 5342
<211> 212
<212> PRT
<213> S.epidermidis

<400> 5342
```
Ile Ser Leu Glu Leu Gln Leu Ala Ile Asp Leu Leu Asn Lys Glu Glu
1                   5                   10                  15
Ala Ala Lys Leu Ala Gln Lys Val Glu Glu Tyr Val Asp Ile Val Glu
                20                  25                  30
Ile Gly Thr Pro Ile Val Ile Asn Glu Gly Leu Pro Ala Val Gln His
            35                  40                  45
Leu Asn Glu Asn Ile Asn Asn Ala Lys Val Leu Ala Asp Leu Lys Ile
        50                  55                  60
Met Asp Ala Ala Asp Tyr Glu Val Ser Gln Ala Val Lys Tyr Gly Ala
65                  70                  75                  80
Asp Ile Val Thr Ile Leu Gly Val Ala Glu Asp Ala Ser Ile Lys Ala
                85                  90                  95
Ala Val Glu Glu Ala His Lys His Gly Lys Ala Leu Leu Val Asp Met
            100                 105                 110
Ile Ala Val Gln Asn Leu Glu Gln Arg Ala Lys Glu Leu Asp Glu Met
            115                 120                 125
Gly Ala Asp Tyr Ile Ala Val His Thr Gly Tyr Asp Leu Gln Ala Glu
            130                 135                 140
Gly Lys Ser Pro Leu Asp Ser Leu Arg Thr Val Lys Ser Val Ile Lys
145                 150                 155                 160
Asn Ser Lys Val Ala Val Ala Gly Gly Ile Lys Pro Asp Thr Ile Lys
                165                 170                 175
Asp Ile Val Ala Glu Asp Pro Asp Leu Val Ile Val Gly Gly Gly Ile
            180                 185                 190
Ala Asn Ala Asp Asp Pro Val Glu Ala Ala Lys Gln Cys Arg Ala Ala
            195                 200                 205
Ile Glu Gly Lys
        210
```

<210> 5343
<211> 116
<212> PRT
<213> S.epidermidis

<400> 5343
```
Phe Ile Gln Glu Ile Leu Lys Met Arg Asn Asn Asp Glu Ile Ile Thr
1                   5                   10                  15
Ile Ile Lys Ser Ala Met Lys Glu Gln Asp Met Ser Leu Ser Glu Leu
                20                  25                  30
Ala Arg Arg Val Gly Val Ala Lys Ser Ala Val Ser Arg Tyr Leu Asn
            35                  40                  45
Leu Thr Arg Glu Phe Pro Leu Asn Arg Thr Glu Asp Phe Ala Lys Ala
```

```
            50                      55                      60
Leu Ser Ile Ser Thr Glu Tyr Leu Leu Gly Phe Asp Lys Ser Glu Gln
65                      70                      75                      80
Gln Asp Glu Gln Pro Lys His Arg Ala Ala His Leu Glu Gly Glu Leu
                    85                      90                      95
Thr Asp Glu Glu Trp Gln Arg Val Leu Asp Tyr Ala Asp Tyr Ile Arg
                   100                     105                     110
Ser Lys Arg Lys
           115
```

<210> 5344
<211> 167
<212> PRT
<213> S.epidermidis

<400> 5344
```
Leu Thr Glu Glu Lys Cys Arg Met Lys Lys Val Leu Phe Leu Ile Phe
1                       5                      10                      15
Ala Ser Leu Leu Val Leu Gly Ala Cys Gly Gln Asp Glu Asp Lys Asn
                    20                      25                      30
Lys Glu Asp Asp Ala Lys Lys Val Glu Val Lys Lys Thr Lys Glu Asn
           35                      40                      45
Lys Lys Asp Lys Gln Ser Gln Ser Lys Glu Gln Lys Gln Glu Lys Pro
       50                      55                      60
Tyr Asn Asn Asp Asp Glu Pro Ile Leu Asn Asp Asn Arg Asn Ala Asn
65                      70                      75                      80
Asp Asn Asn Ser Asn Gln Arg Asn Asn Lys Gln Asn Gln Asn Val Asp
                    85                      90                      95
Lys Ile Asp Asn Asn Ala Tyr Asn Gln Gln Gln Asn Gly Gln Val Asn
                   100                     105                     110
Gln Lys Glu Asn Thr Glu Asn Gly Leu Asp Pro Asn Phe Val Arg His
           115                     120                     125
Asn Asp Asn Met Val Lys Glu Trp Gln Asn Gln Met Arg Glu His Asn
       130                     135                     140
Glu Asn Phe Asn Pro Glu Ser Gly Gly Asp Leu Tyr Asn Val Glu Thr
145                     150                     155                     160
Gly Asn Tyr Val Asp Asp Glu
                   165
```

<210> 5345
<211> 437
<212> PRT
<213> S.epidermidis

<400> 5345
```
Asp Arg Arg Glu Ser Met Thr Leu Ser Ser Tyr Ala Thr Ser Lys Leu
1                       5                      10                      15
Thr Glu Glu Lys Val Phe Lys Asp Pro Ile His Arg Phe Ile His Val
           20                      25                      30
Gln Asp Gln Leu Ile Trp Asp Leu Ile Lys Thr Lys Glu Phe Gln Arg
           35                      40                      45
Leu Arg Arg Ile Lys Gln Leu Gly Thr Leu Tyr Leu Ser Phe His Thr
       50                      55                      60
Ala Glu His Ser Arg Phe Gly His Ser Leu Gly Val Tyr Glu Ile Val
65                      70                      75                      80
Arg Arg Met Ile Asp Glu Thr Phe Ile Gly Gln Asp Ala Trp Asp Asn
```

```
                     85                      90                      95
Thr Asp Arg Pro Leu Ala Leu Cys Ala Ala Leu Leu His Asp Leu Gly
            100                     105                     110
His Gly Pro Phe Ser His Ser Phe Glu Lys Ile Phe Asn Thr Asp His
            115                     120                     125
Glu Ala Phe Thr Gln Ala Ile Ile Thr Gly Asp Thr Glu Val Asn Gly
        130                     135                     140
Val Leu Ser Arg Val Ser Asp Asn Phe Pro Lys Gln Val Ala Asp Val
145                     150                     155                     160
Ile Asn Lys Thr His Asp Asn Lys Leu Val Ile Ser Met Ile Ser Ser
                165                     170                     175
Gln Ile Asp Ala Asp Arg Met Asp Tyr Leu Gln Arg Asp Ala Tyr Phe
            180                     185                     190
Thr Gly Val Thr Tyr Gly Ser Phe Asp Met Glu Arg Ile Leu Arg Leu
            195                     200                     205
Met Arg Pro Ser Lys Glu Glu Val Leu Ile Lys Asp Ser Gly Met His
        210                     215                     220
Ala Val Glu Asn Phe Ile Met Ser Arg Tyr Gln Met Tyr Trp Gln Ile
225                     230                     235                     240
Tyr Phe His Pro Val Ser Arg Gly Gly Glu Val Leu Leu Asn Asn Cys
                245                     250                     255
Leu Lys Arg Ala Lys Gln Leu Tyr Asn Glu Gly Tyr Glu Phe Lys Met
            260                     265                     270
Tyr Pro Lys Asp Phe Ile Pro Phe Phe Glu Gly Thr Met Thr Ile Glu
            275                     280                     285
Gln Tyr Val Glu Leu Asp Glu Ala Val Val Leu Tyr Tyr Leu Lys Lys
        290                     295                     300
Trp Ile His Glu Asn Asp Thr Ile Leu Ser Asp Leu Ser Arg Arg Phe
305                     310                     315                     320
Ile Asn Arg Asp Leu Phe Lys Tyr Ile Pro Phe Asp Gly Ser Ile Ile
                325                     ·330                    335
Thr Ile Ser Glu Leu Gln Glu Leu Phe Glu Ala Gly Gly Ile Asn Pro
            340                     345                     350
Asp Tyr Tyr Phe Val Ser Glu Ala Phe Ser Asp Leu Pro Tyr Asp Tyr
            355                     360                     365
Asp Arg Pro Gly Ser Asn Arg Lys Pro Ile His Leu Leu Lys Ser Asn
            370                     375                     380
Gly Gly Ile Thr Glu Ile Ser Asn Gln Ser Leu Val Ile Asn Ser Ile
385                     390                     395                     400
Thr Gly Ile Asn Arg Glu Asp His Lys Leu Tyr Tyr Pro Lys Glu Met
                405                     410                     415
Ile Leu Lys Ile Lys Asp Tyr Gln Ile Lys Gly Ser Ile Ile Asn Leu
            420                     425                     430
Leu Asn Glu Leu Asn
            435
```

```
<210> 5346
<211> 219
<212> PRT
<213> S.epidermidis
```

```
<400> 5346
Thr Glu Gly Glu Thr Phe Val Leu Lys Arg Met Arg Asp Asp Ile Lys
1               5                       10                      15
Met Val Phe Glu Gln Asp Pro Ala Ala Arg Ser Thr Leu Glu Val Ile
            20                      25                      30
```

```
Thr Thr Tyr Ala Gly Leu His Ala Val Trp Ser His Leu Ile Ala His
        35              40              45
Lys Leu Tyr Lys Asn Arg Arg Tyr Val Ala Ala Arg Met Ile Ser Gln
    50              55              60
Leu Ser Arg Phe Phe Thr Gly Ile Glu Ile His Pro Gly Ala Lys Ile
65              70              75                      80
Gly Lys Arg Leu Phe Ile Asp His Gly Met Gly Val Val Ile Gly Glu
                85              90              95
Thr Cys Thr Ile Gly Asp Asn Val Thr Ile Tyr Gln Gly Val Thr Leu
            100             105             110
Gly Gly Thr Gly Lys Glu Lys Gly Lys Arg His Pro Asp Ile Gly Asp
            115             120             125
Asn Val Leu Ile Ala Ala Gly Ser Lys Ile Leu Gly Asn Ile Lys Ile
    130             135             140
Glu Ser Asn Val Asn Ile Gly Ala Asn Ser Val Val Leu Gln Ser Val
145             150             155             160
Pro Ser Tyr Thr Thr Val Val Gly Ile Pro Gly His Ile Val Lys Gln
            165             170             175
Glu Gly Arg Arg Ile Gly Lys Thr Phe Asp His Arg Asn Leu Pro Asp
            180             185             190
Pro Leu Tyr Glu Gln Ile Lys His Leu Glu Arg Gln Leu Glu Lys Ala
        195             200             205
Lys Asn Gly Glu Ile Gln Asp Asp Tyr Ile Ile
    210             215
```

<210> 5347
<211> 344
<212> PRT
<213> S.epidermidis

<400> 5347

```
Gly Gly Leu Phe Met Lys Ala Ala Val Val Thr Lys Asp His Arg Val
1               5               10              15
Ser Ile Glu Glu Lys Arg Leu Arg Glu Leu Arg Pro Gly Glu Ala Leu
            20              25              30
Val Lys Thr Glu Tyr Cys Gly Val Cys His Thr Asp Leu His Val Lys
        35              40              45
Asn Ala Asp Phe Gly Asp Val Thr Gly Val Thr Leu Gly His Glu Gly
    50              55              60
Ile Gly Arg Val Ile Lys Ile Ala Asp Asn Val Asp Ser Leu Lys Val
65              70              75              80
Gly Asp Arg Val Ser Ile Ala Trp Met Tyr Ala Ala Cys Gly Asn Cys
                85              90              95
Glu Tyr Cys Thr Thr Gly Arg Glu Thr Leu Cys Arg Asp Val Leu Asn
            100             105             110
Ala Gly Tyr Thr Val Asp Gly Ala Met Ala Glu Glu Val Ile Val Asp
        115             120             125
Ala Asn Tyr Ala Val Lys Val Pro Glu Asn Leu Asp Pro Ala Ala Ala
    130             135             140
Ser Ser Ile Thr Cys Ala Gly Val Thr Thr Tyr Lys Ala Val Lys Val
145             150             155             160
Ser Gly Ile Glu Pro Gly Gln Trp Leu Gly Val Phe Gly Val Gly Gly
            165             170             175
Leu Gly Asn Leu Ala Leu Gln Tyr Ala Lys Asn Val Met Gly Ala Lys
        180             185             190
Val Val Ala Phe Asp Ile Asn Asp Asp Lys Leu Asn Phe Ala Lys Glu
```

```
            195                    200                    205
Leu Gly Ala Asp Ala Ile Ile Asn Ser Thr Asn Val Asp Pro Ile Glu
    210                    215                    220
Glu Val Asn Arg Leu Thr Asn Asn Lys Gly Leu Asp Ala Thr Val Ile
225                    230                    235                    240
Thr Ala Val Ala Lys Thr Pro Phe Asn Gln Ala Val Asp Val Val Lys
                245                    250                    255
Ala Gly Ala Arg Val Val Ala Val Gly Leu Pro Val Asp Lys Met Asp
                260                    265                    270
Leu Asp Ile Pro Arg Leu Val Leu Asp Gly Ile Glu Val Val Gly Ser
                275                    280                    285
Leu Val Gly Thr Arg Gln Asp Leu Arg Glu Ala Phe Gln Phe Ala Ala
                290                    295                    300
Glu Asn Lys Val Ile Pro Lys Ile Gln Leu Arg Gln Leu Ser Glu Ile
305                    310                    315                    320
Asn Asp Ile Phe Asp Glu Met Glu Lys Gly Thr Ile Thr Gly Arg Met
                325                    330                    335
Val Ile Asp Met Lys Ser Thr His
                340
```

<210> 5348
<211> 124
<212> PRT
<213> S.epidermidis

<400> 5348

```
Trp Lys Ser Leu Tyr Arg Lys Val Gly Ser Lys Met Lys Asn Lys Phe
1               5                   10                  15
Leu Ile Cys Asp Glu Cys Gln Ala Val Asn Leu Lys Ser Leu Lys Arg
            20                  25                  30
Lys Leu Glu Lys Leu Asp Pro Glu Ala Glu Ile Glu Ile Gly Cys Gln
            35                  40                  45
Ser Tyr Cys Gly Pro Gly Arg Arg Lys Thr Phe Ala Phe Val Asn Asn
        50                  55                  60
Arg Pro Leu Ala Ala Leu Thr Glu Glu Glu Leu Met Glu Lys Val Thr
65                  70                  75                  80
Lys Gln Leu Lys Lys Pro Arg Asp Pro Glu Glu Glu Glu Arg Leu Arg
                85                  90                  95
Lys Arg Asn Glu Glu Arg Lys Arg Arg Lys Glu Glu Gln Asp Arg Lys
            100                 105                 110
Leu Lys Glu Lys Leu Lys Lys His Lys Ala Glu Lys
        115                 120
```

<210> 5349
<211> 191
<212> PRT
<213> S.epidermidis

<400> 5349

```
Asn Ala Thr Leu Thr Phe Val Ala Val Ile Leu Ile Ser Leu Ile Leu
1               5                   10                  15
Asp Glu Ile Gly Phe Phe Glu Trp Ser Ala Ile His Met Val Lys Ala
            20                  25                  30
Ser Gln Gly His Gly Leu Lys Met Phe Val Phe Ile Met Ile Leu Gly
        35                  40                  45
Ala Ile Ile Ala Ala Phe Phe Ala Asn Asp Gly Ala Thr Leu Ile Leu
```

```
        50                          55                          60
Thr Pro Ile Ala Leu Ala Met Ile Arg Asn Leu Gly Phe Asn Lys Lys
65                          70                          75                          80
Leu Val Phe Pro Phe Ile Ile Ala Cys Gly Phe Ile Val Tyr Ser Thr
                        85                          90                          95
Ser Leu Pro Leu Val Val Ser Asn Leu Val Asn Ile Val Ser Ala Asp
                        100                         105                         110
Tyr Phe Gly Ile Glu Phe Val Glu Tyr Leu Lys Arg Met Phe Ile Pro
                115                         120                         125
Asn Leu Phe Ser Leu Leu Ala Ser Ile Leu Ile Leu Trp Phe Tyr Phe
        130                         135                         140
Arg Lys Ser Ile Pro Lys Thr Phe Asp Ile Ser Ser Ile Phe Glu Pro
145                         150                         155                         160
Lys Asn Ala Ile Arg Asp Thr Arg Leu Phe Lys Ile Ser Trp Ile Ile
                        165                         170                         175
Leu Ala Leu Leu Leu Ile Gly Tyr Leu Val Ser Glu Phe Ile Pro
                180                         185                         190
```

<210> 5350
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5350
```
Ile Gln Leu Cys Asn Arg Thr Ile Phe Asn Met Ile Asn Ile Gly Ile
1                   5                           10                          15
Trp Pro Met Val Ile Leu Ala Leu Leu Ile Ile Ala Asn Ser Ile Phe
                20                          25                          30
Met Val Tyr Lys Thr Val Asp Val Lys Lys Arg Lys
                35                          40
```

<210> 5351
<211> 283
<212> PRT
<213> S.epidermidis

<400> 5351
```
Leu Ser Phe Cys Leu Tyr Ile Leu Ile Trp Met His Asn Phe Ser His
1                   5                           10                          15
Glu Gly Cys Ala Phe Phe Leu Ile Gln Ile Lys Ile Ile Gly Gly Ile
                20                          25                          30
Lys Met Lys Lys Thr Ala Ile Ile Thr Gly Ser Ser Arg Gly Leu Gly
        35                          40                          45
Ala Lys Ile Ala Ile Thr Leu Leu Glu Lys Gly Tyr Asn Val Val Val
        50                          55                          60
Asn Tyr Lys Gln Asn Lys Asp Lys Ala Glu Lys Leu Ile Arg Asn Tyr
65                          70                          75                          80
Asn Gln Ser Arg Ala Ile Ala Ile Gln Ala Asp Val Thr Asp Arg Asn
                        85                          90                          95
Asp Val Asn Arg Met Ile Gln Thr Ala Thr Gln His Phe Gly Lys Ile
                100                         105                         110
Asp Ile Val Ile Asn Asn Ala Leu Val Gly Phe Lys Phe Asp Pro Asn
                115                         120                         125
Gln Gln Lys Ser Phe Lys Asp Leu Thr Trp Glu Asp Tyr Gln Gln Gln
        130                         135                         140
Leu Asn Gly Thr Leu Lys Gly Ala Phe Asn Val Thr Gln Ser Val Ile
```

```
     145                     150                     155                     160
     Pro Gln Phe Ile Glu Gln Gln Ser Gly Cys Ile Val Ser Ile Gly Thr
                 165                     170                     175
     Asn Leu Tyr Gln Asn Pro Val Val Pro Tyr His Glu Tyr Thr Thr Ala
                 180                     185                     190
     Lys Ala Gly Leu Ile Gly Phe Thr Arg Asn Ile Ala Ala Glu Leu Gly
                 195                     200                     205
     Gln Tyr Gly Ile Thr Ala Asn Val Val Ser Gly Gly Leu Leu Lys Thr
             210                     215                     220
     Thr Asp Ala Ser Ala Val Thr Thr Pro Glu Val Phe Asp Leu Ile Ala
     225                     230                     235                     240
     Gln Thr Thr Pro Leu Arg Lys Val Thr Ser Pro Gln Asp Val Ala Asn
                 245                     250                     255
     Met Val Val Tyr Leu Ala Ser Asp Glu Ala Arg Gly Val Thr Gly Gln
                 260                     265                     270
     Asn Ile Thr Val Asp Gly Gly Leu Thr Met Asn
                 275                     280
```

```
<210> 5352
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5352
Asn Leu Pro Trp Thr Ile Ser Lys Val Thr Arg Asp Ile Ser His Leu
1               5                   10                  15
Gly Phe Glu Ala Gln Pro Gly Val Gly Leu Cys Ile Gln Phe His Phe
            20                  25                  30
Leu Ile Leu Leu Val Tyr Gly Met Tyr Glu Phe
        35                  40


<210> 5353
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5353
Lys Gly Lys Cys Thr Thr Ile Lys Phe Phe Leu Ile Phe Ile Ile Lys
1               5                   10                  15
Phe Thr Tyr Lys Ser Leu Phe Tyr Leu Leu Asn Ser Met Lys Met Thr
            20                  25                  30
Leu Asn Asn Lys Leu His Val Met
        35                  40


<210> 5354
<211> 75
<212> PRT
<213> S.epidermidis

<400> 5354
Thr Glu Arg Trp Cys Leu Ile Met Glu Phe Asn Val Lys Val Asn Val
1               5                   10                  15
Asp Ala Asp Glu Ala Ile Glu Lys Leu Glu Arg Ile Lys Lys Leu Tyr
            20                  25                  30
Glu Glu Ile Asn Gln Leu Lys Asn Asp Arg Pro Val Val Lys Val Gly
        35                  40                  45
```

Ile Ser Asn Glu Ala Asp Val Glu Gln Ile Arg Ser Tyr Ile Asn Glu
    50   55   60
Lys Asn Val Glu Asn Ala Asn Phe Asn Leu Phe
65   70   75

<210> 5355
<211> 168
<212> PRT
<213> S.epidermidis

<400> 5355
Arg Ser Phe Arg His Glu Met Phe Lys Ser Gly Arg Ala Lys Leu Ser
1   5   10   15
Pro Val Thr Thr Ser Arg Tyr Gln Gly Val His Ile Val Ala Lys Lys
            20   25   30
Val Glu Lys Val Val Lys Leu Gln Ile Pro Ala Gly Lys Ala Asn Pro
        35   40   45
Ala Pro Pro Val Gly Pro Ala Leu Gly Gln Ala Gly Val Asn Ile Met
    50   55   60
Gly Phe Cys Lys Glu Phe Asn Ala Arg Thr Gln Glu Gln Ala Gly Leu
65   70   75   80
Ile Ile Pro Val Glu Ile Ser Val Tyr Glu Asp Arg Ser Phe Thr Phe
                85   90   95
Ile Thr Lys Thr Pro Pro Ala Pro Val Leu Leu Lys Lys Ala Ala Gly
            100   105   110
Val Glu Lys Gly Ser Gly Glu Pro Asn Lys Thr Lys Val Ala Thr Val
            115   120   125
Thr Lys Asp Gln Val Arg Glu Ile Ala Gln Thr Lys Met Gln Asp Leu
        130   135   140
Asn Ala Ala Asp Glu Glu Ala Ala Met Arg Ile Ile Glu Gly Thr Ala
145   150   155   160
Arg Ser Met Gly Ile Thr Val Gln
                165

<210> 5356
<211> 172
<212> PRT
<213> S.epidermidis

<400> 5356
Glu Val Ser Arg Leu Ser Glu Lys Lys Gly Phe Asn Phe Asn Ile Ile
1   5   10   15
Lys Asn Asp Pro Leu Asp Gly His Lys Gly Thr Asn Ile Gly Ser Ile
            20   25   30
Ser Leu Asp Asn Ile Ala Pro Val Phe Ile Asp Val Glu Asn Gln Lys
        35   40   45
Ala Phe Val Asp Ile Gly Gly Met His Ala Arg Ala Glu Val Glu Lys
    50   55   60
Gly Val Lys Trp Ile Thr Asp Lys Ser Gln Val Glu Gly Glu Glu Ala
65   70   75   80
Lys Ala Tyr Trp Leu Cys Trp Val Thr Thr Glu Arg Ser Glu Glu Gly
                85   90   95
Pro Tyr Tyr Ala Gly Val Thr Ala Cys Tyr Leu Leu Val Asn Lys Ser
            100   105   110
Ile Arg Arg Gly Tyr Lys Ser Met Pro Glu His Val Asn Met Met Asp
        115   120   125

```
Lys Ser Met Lys His Gln Phe Ile Ile Asp Gln Ile Gly Asp Asp Asn
    130                 135                 140
Lys Gln Ile Leu Lys Glu Phe Leu Gln Asn His Asn Val Glu Met Trp
145                 150                 155                 160
Asn Asn Ser Ser Glu Glu Leu Tyr Arg Ala Phe Glu
                165                 170
```

<210> 5357
<211> 75
<212> PRT
<213> S.epidermidis

<400> 5357
```
His Leu Leu Leu Glu Ala Leu Ser His Gly Ser Thr Leu His Leu Ile
1               5                   10                  15
Ala Ile Leu Ile Phe Asp Leu Leu Leu Phe Ser Ser Gln Leu Phe Ile
                20                  25                  30
Phe Ile Asn Lys Gly Ala Phe Ile Asn Ile Tyr Asp Val Leu Thr Ala
            35                  40                  45
Thr Ala His Ser Leu Thr His Lys His Leu Thr Thr Asn Pro Leu Asn
        50                  55                  60
His Phe Ile Phe Ile Ile Ile Cys Cys His Leu
65                  70                  75
```

<210> 5358
<211> 157
<212> PRT
<213> S.epidermidis

<400> 5358
```
Ile Met Pro Arg Lys Gly Ser Val Pro Lys Arg Asp Val Leu Pro Asp
1               5                   10                  15
Pro Ile His Asn Ser Lys Leu Val Thr Lys Leu Ile Asn Lys Ile Met
                20                  25                  30
Leu Asp Gly Lys Arg Gly Thr Ala Gln Arg Ile Leu Tyr Ser Ala Phe
            35                  40                  45
Asp Leu Val Glu Gln Arg Ser Gly Arg Asp Ala Leu Glu Val Phe Glu
        50                  55                  60
Glu Ala Ile Asn Asn Ile Met Pro Val Leu Glu Val Lys Ala Arg Arg
65                  70                  75                  80
Val Gly Gly Ser Asn Tyr Gln Val Pro Val Glu Val Arg Pro Glu Arg
                85                  90                  95
Arg Thr Thr Leu Gly Leu Arg Trp Leu Val Asn Tyr Ala Arg Leu Arg
            100                 105                 110
Gly Glu Lys Thr Met Glu Asp Arg Leu Ala Asn Glu Ile Leu Asp Ala
        115                 120                 125
Ala Asn Asn Thr Gly Gly Ala Val Lys Lys Arg Glu Asp Thr His Lys
    130                 135                 140
Met Ala Glu Ala Asn Lys Ala Phe Ala His Tyr Arg Trp
145                 150                 155
```

<210> 5359
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5359
Lys Ile Ile Phe Tyr Ser His Gln Leu Ser Leu Leu Ile Arg Lys Lys
1   5   10   15
Thr Trp Asp Asn His Phe Val Pro Gly Leu Ser Phe Tyr Asp Leu Ser
            20   25   30
Ile Val Ser His Leu Leu Lys Ile
            35   40

<210> 5360
<211> 901
<212> PRT
<213> S.epidermidis

<400> 5360
Lys Leu Leu Arg Phe Leu Trp Leu Arg Arg Ser Lys Thr Leu Lys Leu
1   5   10   15
Asp Asn Leu Ile Thr Lys Leu His Ser Tyr Phe Ser Gln Lys Phe Val
            20   25   30
Ser Gln Leu Glu Asn Asn Phe Glu Gln Ile Lys Tyr Trp Thr Asn Lys
            35   40   45
Ser Asp Asp Ser Phe Asn Glu His Leu Thr Thr Gln Lys Asn Ala His
            50   55   60
Thr Thr Asp Gln Ile Lys His Lys Thr Thr Lys Gly Lys Asp Val Val
65   70   75   80
Leu Ser Asn His Glu Asn Tyr Gln Asp Glu Leu Ile Glu His Leu Val
                85   90   95
Leu Gly His Asn Gly Asp Gly Asn Asn Glu Leu Lys Ala Ser His Thr
            100   105   110
Ser Met Asp Ala Gln Ser Phe Asp Ser Leu His Gln Arg Leu Tyr His
            115   120   125
Asp Phe Leu Arg Glu Ser Asn Ala Arg Glu Glu Leu Arg Ala Asp Leu
            130   135   140
Thr Lys Lys Ile Gln Arg Ile Val Asn Val Asp Asp Phe Gly Gly Asp
145   150   155   160
Pro Thr Gly Gln Lys Asp Ser Thr Lys Ala Phe Gln Asp Ala Leu Gly
                165   170   175
Asn Gly Asn Val Gln Val Thr Met Ser Gly Gly Thr Tyr Leu Thr Thr
            180   185   190
Gly Ile Lys Met Pro Asn Asn Ser Arg Leu Val Gly Gln Gly Lys Asp
            195   200   205
Ile Thr Thr Ile Lys Phe Met Asp Glu Thr Pro Ala Glu Asn Ile Gly
            210   215   220
Ile Thr Asn Leu Lys Met Ser Gly Gly Ala Glu Asn Ile Ser Leu Glu
225   230   235   240
Ser Phe Ser Phe Asn Gly Asn Lys Phe Arg Gln Asn Lys Thr Leu Lys
                245   250   255
Ala Thr Gly Gly Ser Arg Ser Ser Asn Ile Arg Phe Ala Gly Val Thr
            260   265   270
Asn Gly Tyr Ile Tyr Asn Val Lys Ser Tyr Asp Ala Leu Leu His Cys
            275   280   285
Ile Asp Val Thr Tyr Ala Asn Asp Asn Tyr Tyr Tyr Glu Gly Asp Gly
            290   295   300
Asn Arg Val Pro Tyr Ala Leu Glu Ser Lys His Ile His Ile Asp Asn
305   310   315   320
Cys Glu Val Tyr Gly Cys Gly Asp Asp Gly Ile Thr Thr His His Ser
                325   330   335

```
Arg Tyr Ile Thr Ile Ser Asn Cys Tyr Ala His Thr Pro Thr Gly Gly
        340                 345                 350
Ser Asn Asn Asn Gly Val Glu Ile Asp Asp Gly Ser Gln Tyr Val Phe
        355                 360                 365
Leu Ser Asn Asn Arg Thr Lys Gly Asn Phe Gly Gly Leu Glu Ile Lys
    370                 375                 380
Ala His Ser Asn Ala Ser Ala Ala Ser Gly Val Phe Val Asn Gly His
385                 390                 395                 400
Val Ser Ile Glu Asp Thr Arg Ala Tyr Asn Ile Arg His Ile Gly His
                405                 410                 415
His Arg Ala Lys Thr Asp Asn Lys Ser Leu Thr Ala Tyr Asp Val Val
            420                 425                 430
Leu Asn Asn Cys Leu Ala Leu Asn Pro Lys Tyr Asn Gly Val Tyr Pro
        435                 440                 445
Gly Ser Thr Pro Arg Ala Leu Leu Ile Ser Ala Tyr Arg Asn Val Ser
    450                 455                 460
Val Asn Asn Phe Thr Ala Ile Gly Asp Ser Asp Phe Gly Lys Leu Glu
465                 470                 475                 480
Gly Gly Lys Leu Asp Lys Lys Gln Pro Ala Ile Ala Ile Gln Phe Met
            485                 490                 495
Ser Glu Asn Ile Ser Leu Asn Asn Ile Asn Val Arg Asn Phe Lys Asn
            500                 505                 510
Ala Glu Val Asp Ile Arg Leu Phe Gly Gly Asp Asn Arg Pro Ser Arg
        515                 520                 525
Val Ser Leu Asn Asn Ile Asn Ile Trp Asn Ser Ser Asn Asn Ile Gly
    530                 535                 540
Ile Gly Val Gly Ser Lys Ile Tyr Asp Thr Lys Ile Thr Asn Cys Asn
545                 550                 555                 560
Leu His Gly Asn Gly Ser Gly Ile Gly Leu Arg Leu Thr Asn Asn His
            565                 570                 575
Ala Met Ile Ser Gly Val Thr Ala Asp Asn Tyr Ser Thr Ser Ala Trp
            580                 585                 590
Ile Ala Gly Glu Lys Tyr Asp Thr Pro Pro Thr Val Gly Lys Gly Gly
        595                 600                 605
Ala Ser Ile Ala Ser Thr Gly Ser Ala Gly Val Ala Asn Ala Ser Ala
        610                 615                 620
Val Ile Ala Ser Thr Gly Gly Ser Lys Ala Tyr Ser Asn Arg Ser Phe
625                 630                 635                 640
Val Leu Gly Ser Gly Ala Asn Ser Lys Ser Tyr Gly Ser Arg Ser Gly
            645                 650                 655
Ile Ile Asn Ser Leu Asn Ser Glu Thr Asp Lys Lys Gly His Thr Gln
            660                 665                 670
Leu Ile Met Asn Ser Asn Arg Val Lys Ser Pro Gly Asn Tyr His Val
        675                 680                 685
Val Ala Gly Tyr Gly Ser Ser Gly Asn Ala Ser Thr Ser Asn Ile Lys
        690                 695                 700
Phe Asp Leu Ser Thr Tyr Ser Gly Asn Leu Thr Leu Ala Gly Gln Leu
705                 710                 715                 720
Lys Gln Asp Ser Ala Asp Ile Ala Glu Leu Phe Glu Ser Gln Asn Gly
            725                 730                 735
Leu Ala Ile Asp Leu Gly Thr Ile Val Thr Leu Asp Gly Asp Lys Ile
            740                 745                 750
Arg Lys Ala Gln Pro Asn Asp Thr Pro Ile Gly Val Ile Ser Gly Thr
        755                 760                 765
Ala Ala Leu Val Ala Asn Glu Lys Thr Phe His His Lys Asp Arg Phe
        770                 775                 780
```

Leu Lys Asn Glu Tyr Gly Val Thr Ile Thr Asn Arg Lys Gln Val Glu
785   790   795   800
Phe Val Asp Asp Glu Gly Asn Val Ser Phe Glu Trp Arg Asp Ile Pro
                805   810   815
Val Glu Asn Pro Glu Tyr Asn Asp Lys Ile Asp Tyr Gln Ser Arg Ser
                820   825   830
Glu Arg Pro Glu Trp Asn Val Val Gly Leu Leu Gly Gln Ile Tyr Thr
            835   840   845
Asn Ile Glu Lys Asp Val Ile Pro Gly Asp Tyr Ile Asn Gly Arg Ala
        850   855   860
Gly Val Gly Tyr Lys Asp Asn Val Asn Gly Lys Gly Arg Val Met Lys
865   870   875   880
Ile Thr Ser Glu Tyr Thr Glu Glu Arg Gly Cys Ala Ile Ala Leu Val
                885   890   895
Leu Trp Gly Ala Lys
            900

<210> 5361
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5361
Leu Ala Ile Leu Arg Asp Ile Asn Leu Ile Ser Leu His Ile His Leu
1   5   10   15
Asp Arg Cys His Leu Asn Val Asn Phe Ile Glu Tyr Ile Tyr His Ile
            20   25   30
Ala Asn Asn Gln Ala Phe Ile Ile Thr Ile
        35   40

<210> 5362
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5362
Thr Ile Gly Arg Ile Ser Gly Gly Ile Ile Gly Asn Thr Ser Lys Ile
1   5   10   15
Ile Gln Glu Gly Leu Phe Pro Glu Phe Leu Asn Asp Ser Thr Thr Ser
            20   25   30
Lys Arg Leu Ile Ala Arg Val Asn Leu
        35   40

<210> 5363
<211> 133
<212> PRT
<213> S.epidermidis

<400> 5363
Ile His Gln Arg Gly Leu Ile Gln Ile Ile Phe Thr Val Asn Met Asn
1   5   10   15
Gly Arg Ser Asp Glu Met Lys Val Val Tyr Leu Trp Lys Asn Gly Gln
            20   25   30
Ala Ile Ile Val His Lys Asn Glu Glu Asp Glu Tyr Val Tyr Pro Asp
        35   40   45
Glu Lys Trp Thr Glu Asn Gln Pro Pro Gln Gly Ile Ile Leu Pro Cys

```
      50                      55                      60
Tyr Tyr Asp Gly Lys Gln Trp Val Gly Gln Thr Gln Asp Glu Leu Glu
65                      70                      75                      80
Lys Met Leu Pro Glu Val Glu Ile Pro Val Asp Asp Lys Asp Ile Ala
                85                      90                      95
Ile Ala Lys Leu Thr Ser Leu Val Val Asp Leu Gln Glu Glu Val Met
   .            100                     105                     110
Ser Leu Lys Gln Asn Ile Ala Leu Ile Thr Glu Glu Gln Ala Asn Gln
            115                     120                     125
Lys Leu Gly Glu Ala
            130
```

<210> 5364
<211> 121
<212> PRT
<213> S.epidermidis

<400> 5364

```
Glu Met Gln Leu Tyr Leu Lys Asp Gly Met Glu Ile Arg Glu Val Gln
1                   5                       10                      15
Phe Thr Asn Glu Glu Val Gln Asn Tyr Cys Glu Leu Leu Asn Ile Lys
                20                      25                      30
Tyr Asp His Tyr Val Pro Thr Leu Met Cys Ala Lys Leu Trp Pro Gln
            35                      40                      45
Phe Glu Leu Phe Gln Ser Phe Ser Lys Lys Pro Ile Ile Leu Lys Glu
            50                      55                      60
Thr His Ile Lys Thr Gln His Gln Leu Gln Val Asp Cys Thr Tyr Glu
65                      70                      75                      80
Ala Thr Leu His Lys Val Ser Gln Lys Leu Ile Lys Asn Ile Ile Lys
                85                      90                      95
Tyr Thr Tyr Gly Leu Glu Ile Asn Lys Asp Lys Lys His Cys Met Tyr
                100                     105                     110
Ile Lys Gln Ile Phe Ile Glu Val Arg
            115                     120
```

<210> 5365
<211> 168
<212> PRT
<213> S.epidermidis

<400> 5365

```
Leu Ser Ile Arg Ser Lys Tyr Leu Asp Leu Lys Ile Ile Ile Arg Phe
1                   5                       10                      15
Asn Val Thr Asn Glu Val Thr Leu Arg Trp Val Lys Met Asn Leu Glu
                20                      25                      30
Phe Asn Ile Ala Val His Val Leu Cys Phe Leu Ala Gln His Asp Gln
            35                      40                      45
Glu Gln Phe Asn Ser Lys Glu Leu Ala Lys Leu Thr Cys Leu Asn Pro
            50                      55                      60
Val Gln Leu Arg Arg Val Leu Ala Tyr Leu Thr Glu His Asn Tyr Ile
65                      70                      75                      80
Lys Val Gln Arg Gly Lys Ala Gly Gly Tyr Gln Ala Asn Gln His Thr
                85                      90                      95
Ala Gln Val Asp Leu Ala Lys Leu Tyr Gln His Phe Val Leu Asp Lys
                100                     105                     110
Asn Asn Ser Gln Arg Arg Phe Thr Gly Ala Ser Asp Ser His Cys Gln
```

```
            115                 120                 125
Ile Ser Lys Lys Ile Ala His Thr Met Ser His Tyr Tyr Ser Gln Glu
        130                 135                 140
His Gln Ile Ile Leu Asp Phe Tyr Lys Asp Lys Asn Ile Thr Asp Val
145                 150                 155                 160
Leu Ala Asp Ile Leu Gln Glu Gly
                    165
```

<210> 5366
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5366

```
Lys Ile Asn Ser Lys Ile Ser Ser Leu Leu Thr Thr Leu Leu Leu Phe
1               5                   10                  15
Val Leu Phe Tyr Thr Phe Ile Thr Leu Val Tyr Val His Pro Ser Leu
            20                  25                  30
Ile Asn Lys Gly Ile Tyr Phe Ser Asn Leu
        35                  40
```

<210> 5367
<211> 362
<212> PRT
<213> S.epidermidis

<400> 5367

```
Gly Arg Asp Arg Met Ile Gln Val Lys Ala Pro Gly Lys Leu Tyr Ile
1               5                   10                  15
Ala Gly Glu Tyr Ala Val Thr Glu Pro Gly Tyr Lys Ser Ile Leu Ile
            20                  25                  30
Ala Val Asn Arg Phe Val Thr Ala Thr Ile Glu Ala Ser Asn Lys Val
        35                  40                  45
Glu Gly Ser Ile His Ser Lys Thr Leu His Tyr Glu Pro Val Lys Phe
    50                  55                  60
Asp Arg Asn Glu Asp Arg Ile Glu Ile Ser Asp Val Gln Ala Ala Lys
65                  70                  75                  80
Gln Leu Lys Tyr Val Val Thr Ala Ile Glu Val Phe Glu Gln Tyr Val
                85                  90                  95
Arg Ser Cys Asn Met Asn Leu Lys His Phe His Leu Thr Ile Asp Ser
            100                 105                 110
Asn Leu Ala Asp Asn Ser Gly Gln Lys Tyr Gly Leu Gly Ser Ser Ala
        115                 120                 125
Ala Val Leu Val Ser Val Val Lys Ala Leu Asn Glu Phe Tyr Gly Leu
        130                 135                 140
Glu Leu Ser Asn Leu Tyr Ile Tyr Lys Leu Ala Val Ile Ala Asn Met
145                 150                 155                 160
Lys Leu Gln Ser Leu Ser Ser Cys Gly Asp Ile Ala Val Ser Val Tyr
                165                 170                 175
Ser Gly Trp Leu Ala Tyr Ser Thr Phe Asp His Asp Trp Val Lys Gln
            180                 185                 190
Gln Met Glu Glu Thr Ser Val Asn Asp Val Leu Glu Lys Asn Trp Pro
            195                 200                 205
Gly Leu His Ile Glu Pro Leu Gln Ala Pro Glu Asn Met Glu Val Leu
        210                 215                 220
Ile Gly Trp Thr Gly Ser Pro Ala Ser Ser Pro His Leu Val Ser Glu
```

```
225                    230                    235                    240
Val Lys Arg Leu Lys Ser Asp Pro Ser Phe Tyr Gly Asp Phe Leu Asp
            245                    250                    255
Gln Ser His Ala Cys Val Glu Ser Leu Ile Gln Ala Phe Lys Thr Asn
            260                    265                    270
Asn Ile Lys Gly Val Gln Lys Met Ile Arg Ile Asn Arg Arg Ile Ile
            275                    280                    285
Gln Ser Met Asp Asn Glu Ala Ser Val Glu Ile Glu Thr Asp Lys Leu
    290                    295                    300
Lys Lys Leu Cys Asp Val Gly Glu Lys His Gly Gly Ala Ser Lys Thr
305                    310                    315                    320
Ser Gly Ala Gly Gly Gly Asp Cys Gly Ile Thr Ile Ile Asn Lys Val
            325                    330                    335
Ile Asp Lys Asn Ile Ile Tyr Asn Glu Trp Gln Met Asn Asp Ile Lys
            340                    345                    350
Pro Leu Lys Phe Lys Ile Tyr His Gly Gln
            355                    360
```

```
<210> 5368
<211> 705
<212> PRT
<213> S.epidermidis

<400> 5368
Tyr Leu Phe Ser Lys Tyr Trp Lys Glu Lys Lys Tyr Met Ala Arg Asp
1                   5                   10                  15
Phe Ser Leu Lys Asn Thr Arg Asn Ile Gly Ile Met Ala His Ile Asp
            20                  25                  30
Ala Gly Lys Thr Thr Thr Thr Glu Arg Ile Leu Tyr Tyr Thr Gly Arg
            35                  40                  45
Ile His Lys Ile Gly Glu Thr His Glu Gly Ala Ser Gln Met Asp Trp
    50                  55                  60
Met Glu Gln Glu Gln Asp Arg Gly Ile Thr Ile Thr Ser Ala Ala Thr
65                  70                  75                  80
Thr Ala Gln Trp Gln Gly His Arg Val Asn Ile Ile Asp Thr Pro Gly
            85                  90                  95
His Val Asp Phe Thr Val Glu Val Glu Arg Ser Leu Arg Val Leu Asp
            100                 105                 110
Gly Ala Val Thr Val Leu Asp Ala Gln Ser Gly Val Glu Pro Gln Thr
            115                 120                 125
Glu Thr Val Trp Arg Gln Ala Thr Thr Tyr Gly Val Pro Arg Ile Val
            130                 135                 140
Phe Val Asn Lys Met Asp Lys Leu Gly Ala Asn Phe Glu Tyr Ser Val
145                 150                 155                 160
Ser Thr Leu His Asp Arg Leu Gln Ala Asn Ala Ala Pro Ile Gln Leu
            165                 170                 175
Pro Ile Gly Ala Glu Asp Glu Phe Glu Ala Ile Ile Asp Leu Val Glu
            180                 185                 190
Met Lys Cys Phe Lys Tyr Thr Asn Asp Leu Gly Thr Glu Ile Asp Glu
            195                 200                 205
Ile Glu Ile Pro Glu Asp His Lys Glu Arg Ala Glu Glu Ala Arg Ala
            210                 215                 220
Gln Leu Ile Glu Ala Val Ala Glu Asn Asn Asp Asp Leu Met Glu Lys
225                 230                 235                 240
Tyr Leu Gly Asp Glu Glu Ile Ser Val Asp Glu Leu Lys Asp Ala Ile
            245                 250                 255
```

Arg Gln Ala Thr Thr Asp Val Glu Phe Tyr Pro Val Leu Cys Gly Thr
     260   265   270

Ala Phe Lys Asn Lys Gly Val Gln Leu Met Leu Asn Ala Val Ile Asp
     275   280   285

Tyr Leu Pro Ser Pro Leu Asp Val Lys Pro Ile Ile Gly His Arg Ala
     290   295   300

Asn Asn Pro Asp Glu Glu Val Val Ala Lys Pro Asp Asp Ser Ala Glu
305   310   315   320

Phe Ala Ala Leu Ala Phe Lys Val Met Thr Asp Pro Tyr Val Gly Lys
          325   330   335

Leu Thr Phe Phe Arg Val Tyr Ser Gly Thr Leu Ser Ser Gly Ser Tyr
          340   345   350

Val Lys Asn Ser Ser Lys Asp Lys Arg Glu Arg Val Gly Arg Leu Leu
          355   360   365

Gln Met His Ala Asn Ser Arg Gln Glu Ile Asp Thr Val Tyr Ser Gly
     370   375   380

Glu Ile Ala Ala Ala Val Gly Leu Lys Glu Thr Gly Thr Gly Asp Thr
385   390   395   400

Leu Cys Gly Glu Lys Asn Asp Ile Ile Leu Glu Ser Met Glu Phe Pro
          405   410   415

Glu Pro Val Ile His Leu Ser Val Glu Pro Lys Ser Lys Ala Asp Gln
          420   425   430

Asp Lys Met Thr Gln Ala Leu Val Lys Leu Gln Glu Glu Asp Pro Thr
          435   440   445

Phe His Ala His Thr Asp Glu Glu Thr Gly Gln Val Ile Ile Gly Gly
     450   455   460

Met Gly Glu Leu His Leu Asp Ile Leu Val Asp Arg Met Lys Lys Glu
465   470   475   480

Phe Asn Val Glu Cys Asn Val Gly Ala Pro Met Val Ser Tyr Arg Glu
          485   490   495

Thr Phe Lys Gln Pro Ala Gln Val Gln Gly Lys Phe Ser Arg Gln Ser
          500   505   510

Gly Gly Arg Gly Gln Tyr Gly Asp Val His Ile Glu Phe Thr Pro Asn
          515   520   525

Glu Thr Gly Gly Gly Phe Glu Phe Glu Asn Ala Ile Val Gly Gly Val
          530   535   540

Val Pro Arg Glu Tyr Ile Pro Ser Val Glu Gln Gly Leu Lys Asp Ala
545   550   555   560

Met Glu Asn Gly Val Leu Ala Gly Tyr Pro Leu Ile Asp Val Lys Ala
          565   570   575

Lys Leu Phe Asp Gly Ser Tyr His Asp Val Asp Ser Ser Glu Met Ala
          580   585   590

Phe Lys Ile Ala Ala Ser Leu Ala Leu Lys Glu Ala Ala Lys Lys Cys
          595   600   605

Asp Pro Val Ile Leu Glu Pro Met Met Lys Val Thr Ile Glu Met Pro
     610   615   620

Glu Glu Tyr Met Gly Asp Ile Met Gly Asp Val Thr Ala Arg Arg Gly
625   630   635   640

Arg Val Asp Gly Met Glu Pro Arg Gly Asn Ala Gln Val Val Asn Ala
          645   650   655

Tyr Val Pro Leu Ser Glu Met Phe Gly Tyr Ala Thr Ser Leu Arg Ser
          660   665   670

Asn Thr Gln Gly Arg Gly Thr Tyr Thr Met Tyr Phe Asp His Tyr Ala
          675   680   685

Glu Val Pro Lys Ser Ile Ala Glu Glu Ile Ile Lys Lys Asn Lys Gly
     690   695   700

Glu
705

<210> 5369
<211> 90
<212> PRT
<213> S.epidermidis

<400> 5369
Val Ile Tyr Ser Ser Gln Lys Arg Thr Asn Gly Gly Glu Asn Met Val
1   5   10   15
Leu Asn Leu Lys Arg Leu Arg Ala Glu Arg Ile Ala Cys Gly Ile Thr
            20   25   30
Gln Asp Glu Met Ala Gln Met Met Gly Trp Lys Thr Arg Thr Pro Tyr
            35   40   45
Ala Lys Arg Glu Asn Gly Ile Val Asp Ile Gly Ala Asn Glu Phe Ile
        50   55   60
Lys Met Ala Lys Ile Leu Gly Tyr Glu Thr Asn Asn Leu Asp Ile Phe
65   70   75   80
Phe Thr Gln Val Val Pro Lys Lys Glu Gln
                85   90

<210> 5370
<211> 81
<212> PRT
<213> S.epidermidis

<400> 5370
Leu Cys Asn Arg Thr Cys Phe Leu Ile Tyr Leu Leu Asn Thr Arg Tyr
1   5   10   15
Phe His Gln Gln Phe Phe Gln Ser Val Ala Phe Ser Asn Asp Val Lys
            20   25   30
Leu Leu Met Val Pro Asn Val Gly Ile Thr Cys Tyr Ile Ile Lys Cys
            35   40   45
Asn Ile Leu Asn Met Leu Asn Leu Arg Tyr Arg Phe Asn Val Ile Ala
        50   55   60
His Lys Thr Ser Ala His Tyr Pro Tyr Phe Lys Arg Tyr Lys Leu Met
65   70   75   80
Lys

<210> 5371
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5371
Gly Val Ser Arg Leu Ile Lys Arg Ile Leu Lys Ile Trp Phe Thr Ile
1   5   10   15
Ala Met Tyr Glu Leu Gly Lys Trp Ile Gly Arg Glu Val Tyr Tyr Lys
            20   25   30
Leu Thr Ala Asn Asp Glu Val Glu Val Pro Lys Asp Phe Asp Glu Asn
            35   40   45
Asp His Ala His Leu Asn Gly Ile Tyr Gly Gly Tyr
        50   55   60

<210> 5372
<211> 213
<212> PRT
<213> S.epidermidis

<400> 5372
Arg Leu Ile Arg Ser Gly Gln Met Asp Ile Val Gly Met Gln Phe Asn
1   5   10   15
Tyr Leu Lys Val Leu Glu Phe Tyr Gly Arg Asn Lys His Lys Lys Lys
            20   25   30
Leu Tyr Lys Cys Tyr Cys Thr Arg Cys Gly Asn Lys Lys Ile Met Ile
        35   40   45
Gly Thr Glu Val Lys Asn Gly Tyr Ser Lys Ser Cys Gly Cys Leu Asn
        50   55   60
Lys Val Ser His Ser Lys Lys His Gly Met Thr Gly Thr Leu Ile Tyr
65   70   75   80
Asn Lys Trp Lys Gly Met Lys Gln Arg Cys Tyr Asn Ser Asn Tyr Asp
                85   90   95
Phe Tyr Ser Ala Tyr Gly Gly Arg Gly Ile Lys Val Cys Asp Glu Trp
            100   105   110
Lys Asp Asp Phe Met Gln Phe Tyr Lys Asp Met Gly Asp Val Pro Phe
            115   120   125
Glu Gly Ala Glu Leu Asp Arg Ile Asn Asn Asp Asp Asp Tyr Lys Pro
        130   135   140
Ser Asn Cys Arg Trp Val Ser His Glu Glu Asn Ala Asn Asn Arg Arg
145   150   155   160
Lys Tyr His Asn Lys Thr Gly Tyr Thr Gly Val Thr Tyr Lys Pro His
                165   170   175
Leu Asn Lys Tyr Gln Ala Gln Leu Tyr Lys Asn Lys Lys Phe Ile Tyr
            180   185   190
Leu Gly Val Tyr Glu Thr Ala Glu Glu Ala His Leu Ala Tyr Lys Lys
        195   200   205
Ala Lys Asn Glu Tyr
        210

<210> 5373
<211> 89
<212> PRT
<213> S.epidermidis

<400> 5373
Met Lys Arg Ser Gly Gly Asn Gln Met Gly Leu Ile Asp Gly Leu Lys
1   5   10   15
Lys Gln Tyr Thr Leu Tyr Gln Ile Asp Gly Trp Lys Met Cys Ser Val
            20   25   30
Thr Pro Leu Gly Glu Asp Thr Phe Lys Leu Gly Asn Tyr Ala Gly Ile
        35   40   45
His Phe Arg Asn Thr Phe Ser Gly Thr Val Thr Lys Asp Glu Leu Glu
        50   55   60
Lys Leu Lys Arg Lys His Lys Leu Phe Arg Lys Glu Glu Leu Gln Gln
65   70   75   80
Gln Met Thr Ile Asn Glu Leu Leu Phe
                85

<210> 5374
<211> 69

<212> PRT
<213> S.epidermidis

<400> 5374
Met Lys Arg Ser Ser Tyr Leu Arg Arg Gln Ser Asn Leu Ile Ile Ser
1   5   10   15
Met Ile Ile Phe Val Ile Phe Leu Ile Val Asp Ile Asn Val Leu Ile
            20   25   30
Asn Lys His Gln Val Val Pro Val Leu Leu Ser Ser Ile Ser Leu Ile
        35   40   45
Ile Phe Ile Met Leu Phe Val Val Ala Leu Phe Lys Cys Ile Thr Asn
        50   55   60
Tyr Lys His Gln Ser
65

<210> 5375
<211> 260
<212> PRT
<213> S.epidermidis

<400> 5375
Val Pro Met Ser His Ser Tyr Asn Ser Ile Glu Glu Val Leu Lys Ala
1   5   10   15
Val Lys Ser Asn Gln Leu Ser Ile Asn Asp Ala Lys Ala Gln Leu Ser
            20   25   30
His Tyr Asp Glu Leu Gly Phe Ala Lys Ile Asp Leu His Arg Ala Gln
        35   40   45
Arg Gln Gly Phe Pro Glu Val Ile Phe Gly Gln Gly Lys Thr Lys Glu
        50   55   60
Gln Ile Thr Lys Ile Ile Ser Ser Leu Ile Phe His Asn Glu Val Ile
65   70   75   80
Leu Val Thr Arg Val Asp Glu Met Lys Ala Lys Tyr Ile Leu Gln His
            85   90   95
Tyr Pro Asn Leu Glu Tyr His Gln Thr Ala Gln Leu Ile Ser Thr Pro
            100   105   110
Leu Lys Asp Ile Pro Gln Ser Lys Tyr Tyr Val Ser Val Leu Cys Ala
        115   120   125
Gly Thr Ser Asp Leu Pro Ile Ala Glu Glu Ala Ala Leu Thr Ala Glu
        130   135   140
Ile Met Gly Val Ser Val Lys Arg Phe Tyr Asp Val Gly Val Ser Gly
145   150   155   160
Ile His Arg Leu Leu Ser Asn Ile His Asp Ile Arg Arg Gly Lys Val
            165   170   175
Ser Ile Val Ile Ala Gly Met Glu Gly Ala Leu Ala Ser Val Val Gly
            180   185   190
Gly Leu Val Asn His Pro Val Tyr Ala Val Pro Thr Ser Val Gly Tyr
        195   200   205
Gly Ala Asn Leu Asn Gly Val Thr Thr Leu Leu Ser Met Ile Asn Ser
        210   215   220
Cys Ala Pro Gly Thr Ser Val Leu Asn Ile Asn Asn Gly Phe Gly Gly
225   230   235   240
Gly Tyr Asn Ala Ala Gln Ile Ile His Met Leu Glu Asn Lys Glu Ser
            245   250   255
Glu Val Ser Leu
        260

<210> 5376
<211> 65
<212> PRT
<213> S.epidermidis

<400> 5376
Val Ile Trp Arg Leu Ala Met Asp Asn Arg Glu Phe Ile Gln Arg Cys
1   5   10   15
Ile Val Ser Ser Thr Ala Phe Thr Gly His Asp Gly Cys Leu Leu Ile
            20   25   30
Lys Glu Leu Asn Glu Val Tyr Arg Lys Ala Glu Leu Tyr Asp Lys Ile
        35   40   45
Val Glu Asn Asn Ser Lys Ser Leu Val Glu Asn Gly Gly Thr Ile Asn
    50   55   60
Asp
65

<210> 5377
<211> 1040
<212> PRT
<213> S.epidermidis

<400> 5377
Ser Lys Arg Arg Leu Ala Met Asn Lys Asn Phe Met Ala Arg Ile Ser
1   5   10   15
Ala Ile Ile Thr Asp Phe Gln Arg Asn Ile Arg Lys Ala Gln Arg Met
            20   25   30
Ala Lys Thr Glu Ile Pro Asp Glu Ile Glu Thr Gln Val Asp Ala Asn
        35   40   45
Ile Ser Lys Phe Lys Arg Ala Leu Asn Thr Ala Lys Ala Met Ala Gln
    50   55   60
Arg Trp Arg Glu His Thr Val Asp Ile Asp Gly Asn Ala Asn Pro Val
65   70   75   80
Lys Arg Ala Ile Ala Val Val Arg Glu Lys Leu Gln Gln Leu Arg Asp
                85   90   95
Lys Glu Val Asp Ile Lys Gly Asn Asn Asn Pro Leu Lys Arg Ser Val
            100   105   110
Leu Gly Ala Lys Ala Met Leu Ala Thr Leu His Asp Lys Thr Val His
        115   120   125
Val Asn Phe Asp Thr Arg Gly Met Thr Arg Ala Gln Val Leu Thr Arg
    130   135   140
Ala Leu Gly Gln Ser Leu Asp Glu Tyr Gly Asp Lys Met Asp Ala Leu
145   150   155   160
Ala Thr Lys Ile Arg Thr Phe Gly Thr Val Phe Gly Gln Gln Ile Lys
                165   170   175
Gly Met Leu Ile Ala Ser Phe Gln Gly Leu Ile Pro Ile Ile Ala Gly
            180   185   190
Leu Val Pro Ala Ile Met Ala Val Ala Asn Ala Leu Gly Val Val Ala
        195   200   205
Gly Gly Ala Leu Gly Val Ala Gly Ala Phe Gly Ile Ala Ala Ser Gly
    210   215   220
Ala Phe Ala Phe Gly Ala Met Ala Val Ser Ala Ile Lys Met Leu Asn
225   230   235   240
Asp Gly Thr Leu Gln Ala Thr Ala Gln Thr Arg Arg Tyr Gln Ala Ser
                245   250   255
Leu Glu Gln Val Lys Ser Thr Trp Glu Gly Ile Ile Lys Gln Asn Gln

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              260                    265                    270
Ala Gln Ile Phe Asn Thr Leu Ser Asn Ala Leu Asp Thr Val Asn Val
         275                    280                    285
Ala Leu Gly Arg Met Lys Pro Phe Leu Ala Gly Ile Ser Lys Gly Met
     290                    295                    300
Glu Gln Ala Ser Gln Ser Val Leu Lys Trp Ala Gln Asn Ser Gln Thr
305                    310                    315                    320
Ala Ser Lys Phe Phe Asn Met Met Asn Thr Thr Gly Val Lys Thr Phe
                 325                    330                    335
Asn Thr Leu Leu Ser Ala Ala Gly Arg Phe Gly Asp Gly Leu Ile Asn
         340                    345                    350
Val Phe Thr Gln Leu Gly Pro Leu Phe Leu Trp Thr Ala Lys Gly Leu
         355                    360                    365
Asp Asn Leu Gly Lys Lys Phe Gln Asn Trp Ala Asn Ser Val Ala Gly
     370                    375                    380
Gln Asn Ala Ile Lys Ser Phe Ile Glu Tyr Thr Gln Thr Asn Leu Pro
385                    390                    395                    400
Lys Ile Gly Gln Ile Phe Gly Asn Val Phe Met Gly Ile Gly Asn Leu
                 405                    410                    415
Met Lys Ala Phe Ala Gln Asn Ser Ser Asn Ile Phe Asp Trp Leu Val
                 420                    425                    430
Lys Met Thr Ala Lys Phe Arg Glu Trp Ser Glu Gln Val Gly Lys Ser
         435                    440                    445
Glu Gly Phe Lys Lys Phe Val Gln Tyr Val Gln Glu Asn Gly Pro Val
     450                    455                    460
Ile Met Asp Leu Ile Gly Asn Ile Val Arg Val Leu Val Ala Phe Gly
465                    470                    475                    480
Thr Ala Met Ala Pro Ile Ala Ser Val Ile Leu Lys Val Val Thr Ala
                 485                    490                    495
Leu Ala Gly Phe Ile Ala Lys Leu Phe Glu Thr His Pro Ala Ile Ala
                 500                    505                    510
Arg Met Val Gly Ile Gly Met Ile Leu Gly Gly Met Leu Trp Ala Leu
         515                    520                    525
Leu Ala Pro Ile Ile Ala Val Ser Thr Val Leu Ser Asn Val Phe Gly
     530                    535                    540
Val Gly Leu Ile Gln Ala Ile Gly Lys Met Leu Ala Phe Ala Arg Asn
545                    550                    555                    560
Thr Gln Ile Leu Arg Ser Ala Leu Asn Leu Val Lys Ile Ala Phe Arg
                 565                    570                    575
Leu Leu Met Ser Pro Ile Ser Thr Ile Met Arg Ile Leu Pro Met Leu
         580                    585                    590
Ser Gly Ala Phe Gln Ala Leu Gly Val Ala Ile Gly Ala Ile Ser Trp
         595                    600                    605
Pro Val Leu Ala Ile Ile Gly Val Ile Val Ala Leu Ile Gly Ile Ile
     610                    615                    620
Val Trp Leu Trp Lys Thr Asn Glu Asn Phe Arg Lys Thr Cys Ile Glu
625                    630                    635                    640
Ala Trp Asn Thr Ile Lys Asp Thr Ile Met Asn Ala Val Lys Ser Val
                 645                    650                    655
Ile Asn Trp Phe Asn Gln Phe Arg Ala Ser Ile Gln Gln Thr Leu Gln
                 660                    665                    670
Pro Ile Ile Pro Ile Leu Gln Met Leu Gly Gln Val Ala Asn Gln Val
         675                    680                    685
Leu Gly Phe Leu Phe Ile Ser Leu Ile Asn Gly Val Val Met Ala Phe
     690                    695                    700
Gln Tyr Leu Trp Thr Ile Val Ser Val Val Phe Thr Ala Ile Gly Gly
```

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705                     710                     715                     720
Ile Leu Gln Ala Ala Ser Gln Leu Phe Ile Gly Leu Ala Thr Ala Trp
                725                     730                     735
Ile Gln Leu Leu Ser Gly Asp Ile Pro Gly Ala Trp Gln Thr Leu Gln
            740                     745                     750
Thr Met Thr Gln Asn Val Met Asn Thr Ile Trp Asn Thr Ile Leu Ser
            755                     760                     765
Ile Trp Asn Gln Ile Ser Asn Phe Ile Phe Asn Val Leu Asn Arg Ile
        770                     775                     780
Leu Gly Thr Asn Ile Thr Ser Trp Asn Gln Ile Trp Ser Ala Ile Ser
785                     790                     795                     800
Gly Ala Val Thr Arg Ile Trp Asn Thr Val Ala Ser Trp Phe Ser Arg
                805                     810                     815
Val Val Ser Thr Val Ala Gln Lys Met Met Gln Ala Leu Ser Arg Ile
            820                     825                     830
Ile Ser Gly Gly Ala Gln Trp Val Ser Ser Ile Ile Ser Ala Met Ser
            835                     840                     845
Arg Phe Leu Gln Ala Val Val Ser Gly Phe Phe Arg Val Val Gly Ala
        850                     855                     860
Val Gly Asn Gly Met Arg Asn Ala Leu Asn Arg Ala Arg Ser Phe Ile
865                     870                     875                     880
Gly His Phe Tyr Gln Val Gly Val Asp Met Ile Ala Gly Met Ile Arg
                885                     890                     895
Gly Ile Val Gln Lys Ala Lys Asp Leu Ala Ala Ala Ala Trp Asn Ala
            900                     905                     910
Ala Lys Gly Ala Leu Asn Ala Ala Lys Ser Ala Leu Asp Ser His Ser
            915                     920                     925
Pro Ser Arg Lys Phe Ile Gln Leu Gly Asn Asp Ser Met Thr Gly Leu
        930                     935                     940
Gly Met Gly Ile Ser Glu Tyr Ala Gly Lys Ala Ala Arg Glu Ser Lys
945                     950                     955                     960
Leu Ala Ala Leu Lys Val Met Asp Ala Phe Asn Ala Asp Leu Lys Pro
                965                     970                     975
Asp Phe Leu Glu Glu Gly Leu Ala Gly Leu Gly Asn Ser Phe Asp Ala
            980                     985                     990
His Met Ser Lys Asp Val Arg His Ser Met Gln Glu Asn Asn Lys Pro
            995                     1000                    1005
Ile Val Asn Val Thr Val Arg Asn Glu Ser Asp Ile Pro Ala Ile Lys
        1010                    1015                    1020
Ser Tyr Ile Glu Asp Ser Asn Ser Lys Asp Ala Ser Phe Gly Leu Phe
1025                    1030                    1035                    1040
```

<210> 5378
<211> 501
<212> PRT
<213> S.epidermidis

<400> 5378

```
Leu Ile Phe Gly Tyr Leu Leu Ser Thr Gln Leu Ile Val Gly Val Lys
1               5                       10                      15
Ile Met Ser Glu Arg Ile Arg Val Arg Tyr Ala Pro Ser Pro Thr Gly
            20                      25                      30
Tyr Leu His Ile Gly Asn Ala Arg Thr Ala Leu Phe Asn Tyr Leu Phe
        35                      40                      45
Ala Lys His Tyr Asn Gly Asp Phe Val Val Arg Ile Glu Asp Thr Asp
    50                      55                      60
```

Ser Lys Arg Asn Leu Glu Asp Gly Glu Ser Ser Gln Phe Asp Asn Leu
65   70   75   80

Lys Trp Leu Gly Leu Asp Trp Asp Glu Ser Val Asp Lys Asp Lys Gly
85   90   95

Phe Gly Pro Tyr Arg Gln Ser Glu Arg Ala Glu Ile Tyr Asn Pro Leu
100   105   110

Ile Gln Gln Leu Leu Glu Glu Asp Lys Ala Tyr Lys Cys Tyr Met Thr
115   120   125

Glu Glu Glu Leu Glu Ala Glu Arg Glu Ala Gln Ile Ala Arg Gly Glu
130   135   140

Met Pro Arg Tyr Gly Gly Gln His Ala His Leu Thr Glu Glu Gln Arg
145   150   155   160

Gln Gln Tyr Glu Ala Glu Gly Arg Lys Pro Ser Ile Arg Phe Arg Val
165   170   175

Pro Lys Asp Gln Thr Tyr Thr Phe Asn Asp Met Val Lys Gly Glu Ile
180   185   190

Ser Phe Glu Ser Asp Asn Ile Gly Asp Trp Val Ile Val Lys Lys Asp
195   200   205

Gly Val Pro Thr Tyr Asn Phe Ala Val Ala Val Asp Asp His Tyr Met
210   215   220

Gln Ile Ser Asp Val Ile Arg Gly Asp Asp His Val Ser Asn Thr Pro
225   230   235   240

Lys Gln Leu Met Ile Tyr Glu Ala Phe Gly Trp Glu Ala Pro Arg Phe
245   250   255

Gly His Met Ser Leu Ile Val Asn Glu Glu Arg Lys Lys Leu Ser Lys
260   265   270

Arg Asp Gly Gln Ile Leu Gln Phe Ile Glu Gln Tyr Arg Asp Leu Gly
275   280   285

Tyr Leu Pro Glu Ala Leu Phe Asn Phe Ile Thr Leu Leu Gly Trp Ser
290   295   300

Pro Glu Gly Glu Glu Glu Ile Phe Ser Lys Glu Glu Phe Ile Lys Ile
305   310   315   320

Phe Asp Glu Lys Arg Leu Ser Lys Ser Pro Ala Met Phe Asp Arg Gln
325   330   335

Lys Leu Ala Trp Val Asn Asn Gln Tyr Met Lys Thr Lys Asp Thr Glu
340   345   350

Thr Val Phe Glu Leu Ala Leu Pro His Leu Ile Lys Ala Asn Leu Ile
355   360   365

Pro Glu Asn Pro Ser Glu Lys Asp Arg Glu Trp Gly Arg Lys Leu Ile
370   375   380

Ala Leu Tyr Gln Lys Glu Met Ser Tyr Ala Gly Glu Ile Val Pro Leu
385   390   395   400

Ser Glu Met Phe Phe His Glu Met Pro Glu Leu Gly Lys Asp Glu Gln
405   410   415

Glu Val Leu Gln Gly Glu Gln Val Pro Glu Leu Met Asn His Leu Tyr
420   425   430

Gly Lys Leu Glu Ser Leu Glu Ser Phe Glu Ala Thr Glu Ile Lys Lys
435   440   445

Met Ile Lys Glu Val Gln Lys Glu Thr Gly Ile Lys Gly Lys Gln Leu
450   455   460

Phe Met Pro Ile Arg Val Ala Val Thr Gly Gln Met His Gly Pro Glu
465   470   475   480

Leu Pro Asn Thr Ile Glu Val Leu Gly Lys Asp Lys Val Leu Ser Arg
485   490   495

Leu Lys Asn Leu Val
500

```
<210> 5379
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5379
Lys Leu Asn Gly Phe Ile Tyr Ser Asn Leu Gln Leu Asn Tyr Val Leu
1               5                   10                  15
Leu Thr Ser Lys Pro Pro Ala Thr Ile Ile His Val Ser Gly Gly Phe
            20                  25                  30
Asp Leu Phe Ile Ser Leu Leu Cys Ala Ser Leu Thr Phe Pro
            35                  40                  45


<210> 5380
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5380
Phe Arg Gly Gly Gln Thr Met Trp Gly Val Ile Ala Ile Ile Ile Leu
1               5                   10                  15
Val Leu Leu Leu Phe Gly Ser Leu Leu Glu Gln Asn Asp Leu Lys His
            20                  25                  30
Gln Leu Glu Val Lys Glu Tyr Glu Ile Lys Thr Leu Lys Asp Lys Leu
        35                  40                  45
Glu Asn Gly Gly
        50


<210> 5381
<211> 128
<212> PRT
<213> S.epidermidis

<400> 5381
Glu Glu Thr Gly Thr Ile Arg Arg Leu Asp Ile Met Ser Met Thr Glu
1               5                   10                  15
Leu Glu Ala Ile Glu Ile Leu Glu Leu Ile Asn Asn Val Tyr Asp Met
            20                  25                  30
Lys Phe Asn Glu Ile Lys Tyr Asn Leu Trp Val Glu Gln Leu Thr Gln
        35                  40                  45
Tyr Gly Asp Phe Asp Arg Thr Leu His Lys Thr Lys Lys Tyr Val Arg
        50                  55                  60
Glu Ser Arg Tyr Lys Pro Thr Ile Ser Gln Ile Ile Asp Arg Lys Pro
65                  70                  75                  80
Pro Glu Met Glu Ser Ala Val Ile Pro Glu Glu Gln Thr Asp Lys Tyr
                85                  90                  95
Arg Met Gln His Asp Lys Glu Phe Arg Glu Lys Arg Gln Gln Leu Arg
            100                 105                 110
Lys Gln Trp Gln Lys Met Lys Glu Asp Trp Gly Leu Asp Asp Glu Tyr
        115                 120                 125


<210> 5382
<211> 256
<212> PRT
<213> S.epidermidis
```

<400> 5382
```
Trp Met Lys Gly Ser Val Asn Val Glu Asp Ile Val Ile Val Gly Arg
1               5                   10                  15
His Ala Val Lys Glu Ala Ile Ile Ser Gly His Ala Ile Asn Lys Ile
                20                  25                  30
Leu Ile Gln Asp Gly Ile Lys Lys Gln Gln Ile Asn Asp Ile Leu Lys
            35                  40                  45
Asn Ala Lys Ser Gln Lys Leu Ile Val Gln Thr Val Pro Lys Ser Lys
        50                  55                  60
Leu Asp Phe Leu Ala Asn Ala Pro His Gln Gly Val Ala Ala Leu Val
65                  70                  75                  80
Ala Pro Tyr Glu Tyr Ala Asn Phe Asp Glu Phe Leu Gln Lys Gln Lys
                85                  90                  95
Lys Lys Ala Arg Tyr Ser Thr Val Ile Ile Leu Asp Gly Leu Glu Asp
            100                 105                 110
Pro His Asn Leu Gly Ser Ile Leu Arg Thr Ala Asp Ala Ser Gly Val
        115                 120                 125
Asp Ala Val Ile Ile Pro Lys Arg Arg Ser Val Ala Leu Thr Gln Thr
        130                 135                 140
Val Ala Lys Ala Ser Thr Gly Ala Ile Gln His Val Pro Val Ile Arg
145                 150                 155                 160
Val Thr Asn Leu Ser Lys Thr Ile Asp Glu Leu Lys Asp Asn Gly Phe
                165                 170                 175
Trp Ile Ala Gly Thr Glu Ala Asn Asn Ala Thr Asp Tyr Arg Asp Leu
            180                 185                 190
Gln Ala Asp Met Ser Leu Gly Ile Val Ile Gly Ser Glu Gly Gln Gly
            195                 200                 205
Met Ser Arg Leu Val Ser Asp Lys Cys Asp Phe His Ile Lys Ile Pro
        210                 215                 220
Met Val Gly His Val Asn Ser Leu Asn Ala Ser Val Ala Ala Ser Leu
225                 230                 235                 240
Met Met Tyr Glu Val Tyr Arg Lys Arg His Gln Leu Glu Glu Lys Ser
                245                 250                 255
```

<210> 5383
<211> 232
<212> PRT
<213> S.epidermidis

<400> 5383
```
Glu Val Gly Gly Leu Asn Val Ile Tyr Met Tyr Glu Pro Phe Thr His
1               5                   10                  15
Thr Val Thr Lys Thr Asp Leu Ser His Leu His Asn Ile Thr Gly Ile
                20                  25                  30
Pro Leu Asn Thr Leu Trp Tyr Gln Lys Glu Arg Gly Thr Tyr Asn Asp
            35                  40                  45
Lys Leu Lys Cys Phe Phe Thr Asp Thr Met Pro Arg Val Asn Lys Lys
        50                  55                  60
Gln Val Phe Asn Glu Ser Val Val Ala Lys Asp Glu Ile Trp Lys Tyr
65                  70                  75                  80
Ser Glu Lys Tyr Asp Leu Tyr Val Ser Asn Leu Gly Arg Met Lys Arg
                85                  90                  95
Pro Asp Gly Lys Tyr Lys Phe Ala Asn Gly Cys Asn Gly Ile Ser Thr
            100                 105                 110
Val Ile Tyr Lys Asn Lys Lys Tyr Arg Ala Ala Asp Ile Val Tyr Glu
```

```
            115                    120                    125
Thr Phe Ile Gly Asn Leu Arg Thr Gly Tyr His Ala Tyr Pro Lys Asp
      130                    135                    140
Ser Arg Tyr Asn Asn Leu Met Ala Asp Asn Leu Phe Gln Ser Thr Leu
145                    150                    155                    160
Gln Lys Tyr Arg Val Tyr Arg Arg Asn Lys Gly Ile Ser Lys Pro Val
                 165                    170                    175
Tyr Leu Val Asp Asn Asn Asn Arg Ile Val Glu Glu Phe Ala Ser Thr
                 180                    185                    190
Val Glu Ala Gln Lys Leu Leu Phe Ile Asp Arg Arg Asn Ile Ala Arg
          195                    200                    205
Lys Cys Asn Arg Lys His Val Ser Asp Gly Leu Met Tyr Met Trp Ala
       210                    215                    220
Asp Glu Tyr Glu Glu Leu Asn Ala
225                    230
```

<210> 5384
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5384
```
Arg Gly Lys Gly Gly Ile Asn Asn Met Ile Ile Tyr Arg Arg Asn Ile
1               5                    10                    15
Glu Asn Gly Thr Pro Ile Tyr Glu Ile Ile Thr Lys Thr Phe Lys Thr
                 20                    25                    30
Ile Thr Ile Lys Cys Asp Glu Thr Phe Asn Lys Tyr Glu Ile Tyr Gln
          35                    40                    45
Leu Leu Ser Leu Leu Glu Asn Asp Val Asp Asn Met Pro Thr Ser Tyr
       50                    55                    60
Ser Tyr Arg
65
```

<210> 5385
<211> 47
<212> PRT
<213> S.epidermidis

<400> 5385
```
Lys Ser Phe Ile Ile Leu Lys Cys Cys Glu Asn Leu Asn Lys Lys Leu
1               5                    10                    15
Leu Cys Pro Phe Val Val Ile Leu Leu Leu Asn Ser Tyr Asn Glu Arg
                 20                    25                    30
Leu Ile Ile Gly Asp Met Ile Asn Val Phe Asp Lys Ile Asp Ile
          35                    40                    45
```

<210> 5386
<211> 398
<212> PRT
<213> S.epidermidis

<400> 5386
```
Gly Ile Phe Met Thr Lys Ala Leu Tyr Leu Asp Cys His Ala Gly Ile
1               5                    10                    15
Ala Gly Asp Met Leu Leu Ser Ala Leu Val Asp Leu Gly Ala Asn Pro
                 20                    25                    30
```

Glu Asp Ile Glu Ser Glu Leu Lys Lys Leu Pro Leu Asp Gln Phe Lys
            35   40   45
Leu His Phe Gln Lys Arg Val Lys Gln Gly Ile His Ala Met Thr Leu
            50   55   60
Asn Ile Asp Val Lys Glu Ala Asn His His Arg His Val Asn Asp Ile
65   70   75   80
Phe Lys Met Ile Asp Asp Ser Thr Leu Pro Glu Arg Val Lys Tyr Arg
                        85   90   95
Ser Lys Lys Ile Phe Glu Ile Ile Gly Gln Ala Glu Ala Lys Ile His
                    100   105   110
Gly Met Ser Phe Glu Glu Val His Phe His Glu Val Gly Ala Met Asp
                    115   120   125
Ser Ile Ile Asp Ile Ile Gly Gly Cys Ile Ala Leu Glu Gln Leu Gly
            130   135   140
Ile Asn Thr Leu Tyr Cys Ser Ala Ile Pro Thr Gly His Gly Lys Ile
145   150   155   160
Asn Ile Ala His Gly Ile Tyr Pro Ile Pro Ala Pro Ala Thr Ala Glu
                    165   170   175
Ile Leu Lys Gly Ile Pro Ile Ala His Phe Asp Val Gln Ser Glu Leu
                    180   185   190
Thr Thr Pro Thr Gly Ala Ala Phe Ala Lys Gly Leu Val Ser Ser Phe
            195   200   205
Gly Pro Phe Pro Ser Ala Thr Ile Gln His Ile Gly Tyr Gly Ala Gly
            210   215   220
Ser Lys Asp Phe Asp Phe Pro Asn Ile Leu Arg Val Ile Gln Phe Glu
225   230   235   240
Ser Glu Phe Glu Gln Gln Asp Ser Val Gln Val Ile Glu Cys Gln Ile
                    245   250   255
Asp Asp Met Thr Pro Glu Ala Leu Gly Tyr Phe Met Asn Asn Ala Leu
                    260   265   270
Glu Gln Gly Ala Leu Asp Ala Tyr Tyr Thr Pro Ile Phe Met Lys Lys
                    275   280   285
Ser Arg Pro Ser Thr Gln Leu Thr Leu Ile Cys Lys Leu His Asp Lys
            290   295   300
Thr Tyr Phe Glu Gln Leu Ile Leu Gln Glu Thr Ser Ser Leu Gly Val
305   310   315   320
Arg Ser Thr Ser Val Asn Arg Lys Thr Leu Asn Arg Ala Phe Lys Ile
                    325   330   335
Leu Ser Thr Gln His Gly Thr Val Ser Ile Lys Phe Gly Leu Gln Asn
                    340   345   350
Gly Lys Ile Met Lys Met Lys Pro Glu Tyr Glu Asp Leu Lys Lys Ile
                    355   360   365
Ala Lys Thr Thr Lys Gln Pro Phe Gln Val Ile His Asn Glu Val Leu
            370   375   380
Gln Gln Leu Tyr Gln Thr Tyr His Ile Gly Asn Ile Leu Gln
385   390   395

<210> 5387
<211> 499
<212> PRT
<213> S.epidermidis

<400> 5387
Val Leu Phe Met Glu Asn Lys Asn Asn Asn Val Asp Arg Gly Asn Leu
1   5   10   15
Lys Gln Asn Leu Ser Glu Lys Phe Val Trp Ala Ile Ala Tyr Gly Ser

```
                20              ,            25                        30
Cys Ile Gly Trp Gly Ala Phe Ile Leu Pro Gly Asp Trp Ile Lys Gln
         35                  40                  45
Ser Gly Pro Ile Ala Ser Ser Ile Gly Ile Val Ile Gly Ala Leu Leu
         50                  55                  60
Met Ile Leu Ile Ala Val Ser Tyr Gly Ala Leu Val Glu Lys Phe Pro
65   ·          ·          70              75                  80
Val Ser Gly Gly Ala Phe Ala Phe Ser Phe Leu Ser Phe Gly Arg Tyr
                  85                  90                  95
Val Ser Phe Phe Ser Ser Trp Phe Leu Thr Phe Gly Tyr Val Cys Val
             100                 105                 110
Val Ala Leu Asn Ala Thr Ala Phe Ser Leu Leu Ile Lys Phe Leu Leu
         115                 120                 125
Pro Asn Val Leu Asn Asn Gly Lys Leu Tyr Thr Val Ala Gly Trp Asp
    130                 135                 140
Val Tyr Ile Thr Glu Ile Val Ile Ala Thr Val Leu Leu Ile Val Phe
145                 150                 155                 160
Met Leu Ile Thr Ile Arg Gly Ala Ser Val Ser Gly Ser Leu Gln Tyr
                 165                 170                 175
Tyr Phe Cys Val Ala Met Val Leu Val Val Ala Leu Met Phe Ile Gly
             180                 185                 190
Ser Phe Phe Ser Ser His Phe Ser Leu Ser His Leu Glu Pro Leu Ala
         195                 200                 205
Ser Val Asp Lys Gly Trp Phe Gln Ser Ile Ile Met Ile Val Ser Ile
    210                 215                 220
Ala Pro Trp Ala Tyr Val Gly Phe Asp Asn Ile Pro Gln Thr Ala Glu
225                 230                 235                 240
Glu Phe Asn Phe Ser Pro Asn Lys Thr Phe Lys Leu Ile Val Tyr Ser
                 245                 250                 255
Leu Leu Ala Ala Ser Leu Thr Tyr Val Val Met Leu Leu Tyr Thr Gly
             260                 265                 270
Trp Leu Ser Thr Gln Ala Thr Ser Leu Asn Gly Asn Leu Trp Leu Thr
         275                 280                 285
Gly Ala Val Thr Gln Asp Ala Phe Gly Phe Ile Gly Leu Ala Val Leu
         290                 295                 300
Ala Val Ala Ile Ile Met Gly Ile Phe Thr Gly Leu Asn Gly Phe Leu
305                 310                 315                 320
Met Ser Ser Ser Arg Leu Leu Phe Ser Met Gly Arg Ser Gly Ile Met
             325                 330                 335
Pro Thr Val Phe Ser Lys Leu His Ser Lys His Lys Thr Pro Tyr Val
             340                 345                 350
Ala Ile Ile Phe Leu Val Ala Val Ser Leu Ile Ala Pro Trp Leu Gly
         355                 360                 365
Arg Thr Ala Leu Thr Trp Ile Val Asp Met Ser Ser Thr Gly Val Ser
    370                 375                 380
Ile Ala Tyr Phe Ile Thr Cys Leu Ser Ala Thr Lys Leu Phe Ser Phe
385                 390                 395                 400
Asn Lys Gln Ser Asn Thr Tyr Ala Pro Val Tyr Lys Ile Phe Gly Ile
             405                 410                 415
Ile Gly Ser Ile Val Ser Phe Val Phe Leu Cys Leu Leu Leu Ile Pro
         420                 425                 430
Gly Ser Pro Ala Ala Leu Ser Ile Pro Ser Tyr Ile Ala Leu Gly Ile
         435                 440                 445
Trp Leu Val Ile Gly Leu Ile Phe Phe Ile Ile Arg Leu Pro Lys Leu
    450                 455                 460
Lys Lys Met Asn Asn Asp Glu Leu Ser Arg Leu Ile Leu Asn His Ser
```

465   470   475   480
Glu Asp Glu Val Leu Glu Met Val His Glu Pro Gly Gln Ser Asn Ser
                       485   490   495
Thr Asn Lys

<210> 5388
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5388
Ala Lys Ile Met Ser His Lys Ile Leu Val Gln Lys Phe Ser Asp Glu
1   5   10   15
Asn Ile Cys Ala Arg Val Ile Ile Gln Glu Trp Asp Asp Ala Phe Ser
            20   25   30
Leu Ile Tyr Val Pro Leu Phe Ser Phe Leu Leu Gln Ile Ile Asp Ile
            35   40   45
Val Ile Ile Thr Met Lys Phe
    50   55

<210> 5389
<211> 387
<212> PRT
<213> S.epidermidis

<400> 5389
Trp Arg Val Ile Lys Met Lys Gln Pro Val Ile Ile Ala Ala Lys Arg
1   5   10   15
Ile Ala Phe Gly Lys Tyr Gly Gly Arg Leu Arg His Leu Glu Pro Glu
            20   25   30
Ser Leu Leu Glu Pro Leu Phe Asn His Phe Thr Asp Gln Tyr Pro Lys
            35   40   45
Val Met Ser Leu Leu Asp Asp Val Ile Leu Gly Asn Thr Val Gly Asn
    50   55   60
Gly Gly Asn Leu Ala Arg Lys Ser Leu Leu Glu Ala Gly Leu Asp Phe
65   70   75   80
Lys Ile Pro Gly Ile Thr Ile Asp Arg Gln Cys Gly Ser Gly Leu Glu
            85   90   95
Ala Val Ile Gln Ala Cys Arg Met Val Gln Ser Gly Ala Gly Thr Ile
            100   105   110
Tyr Ile Ala Gly Gly Val Glu Ser Thr Ser Arg Ala Pro Trp Lys Ile
            115   120   125
Lys Arg Pro Gln Ser Val Tyr Glu Ser Glu Phe Pro Gln Phe Phe Glu
            130   135   140
Arg Ala Pro Phe Ala Arg Glu Gly Glu Asp Pro Ser Met Ile Glu Ala
145   150   155   160
Ala Glu Asn Val Ala Lys Lys Tyr His Ile Ser Arg Asn Glu Gln Asp
                165   170   175
Asp Phe Ala Tyr Arg Ser His Gln Leu Ala Ser Lys Asn Met Asn Asn
            180   185   190
Gly Asn Ile Ser Gln Glu Ile Leu Pro Phe Lys Val Lys Gly Glu Tyr
            195   200   205
Phe Asn Gln Asp Glu Ser Ile Lys Pro Gln Leu Thr Leu Arg Thr Leu
    210   215   220
Gly Arg Leu Lys Pro Leu Leu Asn Glu Gly Thr Val Thr Val Gly Asn

```
         225                   230                   235                   240
         Ser Cys Lys Lys Asn Asp Gly Ala Val Leu Leu Ile Val Met Glu Glu
                         245                   250                   255
         Asn Arg Ala Arg Gln Leu Gly Phe Thr Glu Gly Ile Lys Phe Val Asn
                         260                   265                   270
         Ser Ala Thr Val Gly Val Gln Pro Gln Tyr Leu Gly Val Gly Pro Val
                         275                   280                   285
         Pro Ala Val Asn Gln Leu Leu Ala Gln Glu Arg Leu Thr Ile Asn Asp
                 290                   295                   300
         Ile Asn Ala Val Glu Leu Asn Glu Ala Phe Ser Ser Gln Val Ile Ala
         305                   310                   315                   320
         Ser Gln Gln Gln Leu Asn Ile Pro Leu Asn Lys Leu Asn Cys Trp Gly
                         325                   330                   335
         Gly Ala Ile Ala Thr Gly His Pro Tyr Gly Ala Ser Gly Ala Ala Leu
                         340                   345                   350
         Val Thr Arg Leu Phe Tyr Met Lys His Gln Phe Arg Thr Ile Ala Thr
                         355                   360                   365
         Met Gly Ile Gly Gly Gly Ile Gly Asn Ala Ala Leu Phe Glu Arg Trp
                 370                   375                   380
         Tyr Gly Asn
         385


         <210> 5390
         <211> 414
         <212> PRT
         <213> S.epidermidis


         <400> 5390
         Tyr Arg Ile Leu Leu Thr Tyr Val Arg Lys Tyr Arg His Ser Ile Asn
         1                   5                   10                  15
         Ile Gly Cys Ile Pro Thr Lys Thr Leu Ile His Asp Gly Ile Glu Gly
                         20                  25                  30
         Ser Ser Phe Lys Glu Ala Ile Thr Arg Lys Lys Glu Val Val Gln Ala
                         35                  40                  45
         Leu Asn Asn Lys Asn Tyr Gln Gly Leu Asn Ser Lys Asp Asn Ile Asp
                 50                  55                  60
         Val Leu Asn Tyr Lys Ala Asn Phe Ile Ser Asn Glu Val Ile Glu Leu
         65                  70                  75                  80
         Gln Asp Asn Asn Gly Thr Ile Gln Glu Thr Ile Thr Ala Asp Lys Ile
                         85                  90                  95
         Val Ile Asn Thr Gly Ser Arg Ala Asn Ile Pro Asp Ile Lys Gly Ile
                         100                 105                 110
         Asp Thr Ala Gln Asn Ile Tyr Asp Ser Thr Gly Leu Leu Asn Ile Asp
                         115                 120                 125
         Tyr Gln Pro Gln Glu Leu Val Ile Ile Gly Gly Gly Tyr Ile Ala Leu
                 130                 135                 140
         Glu Phe Ala Ser Met Phe Ala Asn Phe Gly Thr His Val Thr Ile Leu
         145                 150                 155                 160
         Glu Arg Gly Asp Ala Ile Met Thr Asn Glu Asp Gln Asp Ile Ala Asn
                         165                 170                 175
         Leu Ile Val Lys Asp Leu Gln Asp Lys Gly Val Thr Ile Asn Thr Asn
                         180                 185                 190
         Thr Ser Thr Ile Ala Phe Ser Asn Asn Lys Asp Gln Thr Ile Ile His
                 195                 200                 205
         Thr Asn His Gly Glu Ile Ser Ala Asp Thr Val Leu Leu Ala Thr Gly
                 210                 215                 220
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Arg Lys Pro Asn Thr Asn His Leu Gly Leu Glu Asn Thr Asp Val Lys
225                 230                 235                 240
Ile Gly Lys Gln Gly Glu Val Ile Val Asn Thr His Leu Gln Ser Thr
                245                 250                 255
Val Lys His Ile Tyr Ala Ala Gly Asp Val Lys Gly Gly Leu Gln Phe
                260                 265                 270
Thr Tyr Ile Ser Leu Asp Asp Tyr Arg Ile Ile Lys Ser His Leu Phe
                275                 280                 285
Gly Asp Gly Ser Arg Thr Thr Glu Asn Arg Gly Ala Ile Pro Tyr Thr
                290                 295                 300
Val Phe Ile Asp Pro Pro Leu Ser Arg Val Gly Leu Ile Ala Ser Glu
305                 310                 315                 320
Ala Lys Leu Gln Gly Tyr Asp Ile Leu Glu Asn Lys Val Phe Val Ser
                325                 330                 335
Asn Ile Pro Arg His Lys Ile Asn Asn Asp Ser Arg Gly Leu Phe Lys
                340                 345                 350
Ala Val Ile Asn Lys Asp Thr Lys Glu Ile Leu Gly Ala Ser Leu Tyr
                355                 360                 365
Gly Lys Glu Ser Glu Glu Leu Ile Ser Leu Ile Lys Leu Ala Ile Asp
                370                 375                 380
Gln His Ile Pro Tyr Thr Val Leu Arg Asp Asn Ile Tyr Thr His Pro
385                 390                 395                 400
Thr Met Thr Glu Ser Phe Asn Asp Leu Phe Leu Glu Pro Leu
                405                 410
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```
<210> 5391
<211> 166
<212> PRT
<213> S.epidermidis

<400> 5391
Met Ser Ala Ile Ile Glu Ala Lys Lys Gln Gln Val Asp Thr Ile Ala
1               5                   10                  15
Glu Gln Leu Lys Asn Ser Val Ser Thr Val Ile Val Asp Tyr Arg Gly
                20                  25                  30
Leu Thr Val Ala Glu Val Thr Glu Leu Arg Ser Gln Leu Arg Glu Ala
                35                  40                  45
Gly Val Glu Tyr Lys Val Tyr Lys Asn Thr Met Val Arg Arg Ala Ala
                50                  55                  60
Glu Gln Ala Gly Ile Glu Gly Leu Asp Glu Phe Leu Thr Gly Pro Thr
65                  70                  75                  80
Ala Ile Ala Thr Ser Thr Glu Asp Val Val Ala Pro Ala Lys Val Ile
                85                  90                  95
Ala Gly Phe Ala Lys Glu His Glu Ala Leu Glu Val Lys Thr Gly Val
                100                 105                 110
Met Glu Gly Asn Val Ile Ser Ala Glu Glu Val Lys Thr Val Gly Ser
                115                 120                 125
Leu Pro Ser His Asp Gly Leu Val Ser Met Leu Leu Ser Val Leu Gln
                130                 135                 140
Ala Pro Val Arg Asn Phe Ala Tyr Ala Val Lys Ala Val Gly Glu Gln
145                 150                 155                 160
Lys Glu Glu Ser Ala Glu
                165

<210> 5392
<211> 60
```

<212> PRT
<213> S.epidermidis

<400> 5392
Leu Leu Ile Leu Val Cys Asn Phe Leu Leu Thr Phe Tyr Thr Lys Ala
1   5   10   15
Val Ile Leu Ile Leu Val Ile Ile Leu Pro Lys Thr Val Ala Val Ile
                20   25   30
Asn Asn Leu Lys Gln Tyr Pro Thr Glu Ala Lys Ile Asp Leu Asn Val
            35   40   45
Met Ile Asn Asp Leu Ser Ser Thr Phe Cys Arg Gly
        50   55   60

<210> 5393
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5393
Ser Leu His Ile Ile Met Leu Gln Tyr Asp Asn Leu Tyr Asn Leu Met
1   5   10   15
Val Lys Val His Glu Leu Ile His Ser Pro Phe Arg Val Tyr Tyr Thr
                20   25   30
Leu Glu Val Ser Phe Ile Tyr Gly Lys
            35   40

<210> 5394
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5394
Phe Ile His Ile Phe Tyr Phe Leu Thr Ile Tyr Ile Tyr His Val Ser
1   5   10   15
Glu Lys Ser Ser Leu Leu Ile Thr Pro Tyr Asn Phe Gly Asp Glu Gly
                20   25   30
Val Tyr Phe Lys Asn Leu Asn Trp Arg Gly
            35   40

<210> 5395
<211> 280
<212> PRT
<213> S.epidermidis

<400> 5395
Gly Val His Met Thr Asn Asn His Phe Leu Asn Ile Gly Val Leu Leu
1   5   10   15
Tyr Gly Cys Gly His His Gln Ala Ala Trp Arg Met Lys Asp Ser Asn
                20   25   30
Ile Glu Asp Ile Gly Asn Ile Ser Tyr Tyr Gln His Leu Ala Gln Ile
            35   40   45
Ala Glu Lys Gly Leu Leu Asp Ile Val Phe Phe Ala Asp Asn Gln Ala
        50   55   60
Phe Asn Ala Ser Asp Asn Thr Thr Met Pro Ala Phe Trp Phe Asp Pro
65   70   75   80
Ile Ile Asn Leu Ser Ala Ile Ala Gln Val Thr Ser His Ile Gly Leu

```
                    85                      90                      95
Val Pro Thr Ile Ser Ser Thr Phe Ser Asn Pro Phe Thr Ala Ser Arg
                100                     105                     110
Gln Leu Leu Ser Leu Asp Tyr Leu Ser His Gly Arg Val Gly Trp Asn
            115                     120                     125
Leu Val Thr Ser Met Thr Asp Ile Glu Ala Gln Asn His Ser Leu Gln
        130                     135                     140
Tyr Leu Pro Glu Arg His Glu Arg Tyr Lys Lys Ala Asp Glu Phe Ala
145                     150                     155                     160
Ser Val Met Asn Gln Leu Phe Thr Ser Trp Ser Thr Ala Ser Tyr Val
                165                     170                     175
Pro Asp Lys Asn Asn Asn Lys Ile Ile Glu Ser Lys Asp Ile Lys Pro
            180                     185                     190
Phe Tyr His Glu Gly Asp Tyr Phe Gln Val Arg Gly Pro His Thr Thr
        195                     200                     205
Pro Gln Ser Pro Gln Gly Lys Pro Val Ser Met Gln Ala Gly Ala Ser
        210                     215                     220
Lys Glu Gly Ile Ala Leu Ala Ala Lys Tyr Ala Asp Ala Val Tyr Ser
225                     230                     235                     240
Val Ser Trp Asp Ile Lys Gln Ala Arg Ser Tyr Lys Lys Lys Leu Ser
                245                     250                     255
Asp Ala Ile Ser Lys Thr Gln His Pro Asp Arg Lys Ile Lys Ile Phe
            260                     265                     270
Pro Gly Leu Ser Asn Leu Cys Arg
            275                     280
```

<210> 5396
<211> 148
<212> PRT
<213> S.epidermidis

<400> 5396

```
Ile Met Ser Ile Lys Asp Leu Asn Arg Gly Asp Arg Ile Arg Met Gln
1                   5                       10                      15
Glu Val Asn Gly Val Glu Ile Thr Val Gln Ile Lys Asn Val Tyr Arg
                20                      25                      30
Leu Val Gln Ser Ser Leu Asp Met Asp Lys Trp Val Ala Asp Val Glu
            35                      40                      45
Ala Ile Asp Gly Arg Thr Trp Thr Ile Asp Asp Cys Tyr Asp Phe Tyr
        50                      55                      60
Ser Leu Pro Asn Gly Asn Glu Gly Thr Lys Lys Thr Leu Asp Asp Lys
65                      70                      75                      80
Val Asn His Pro Ser His Tyr Thr Tyr Gly Asp Met Glu Ile Ile Asp
                85                      90                      95
Phe Ile Glu Gln Val Thr Lys Asp Tyr Lys Pro Glu Leu Ala Phe Ala
                100                     105                     110
Ile Gly Asn Ala Ile Lys Tyr Ile Ser Arg Ala Asn Arg Lys Asn Gly
            115                     120                     125
Lys Glu Asp Leu Asp Lys Ala Arg Trp Tyr Leu Asn Arg Ala Phe Glu
        130                     135                     140
Lys Trp Glu Gly
145
```

<210> 5397
<211> 416
<212> PRT

<213> S.epidermidis

<400> 5397
```
Met Met Ser Ile Asp Val Leu Ser Thr Glu Glu Ser Ile Ile Ser Asn
1               5                   10                  15
Leu Met Arg Asn Pro Glu Leu Leu Gly Lys Phe Arg Leu Lys Pro Glu
            20                  25                  30
Met Phe Thr Asp Glu Lys Leu Arg Val Phe Ile Glu Tyr Val Leu Glu
        35                  40                  45
Gln Gly Lys Val Asp Val Asn Gln Ile Tyr Phe Lys Ser Arg Asp Asp
    ,   50                  55                  60
Asn Glu Phe Ile Ser Thr Asp Arg Leu Gly Arg Leu Tyr Asn Ser Asp
65                  70                  75                  80
Gly Thr Asp Lys Ala Phe Phe Met Asp Asp Gln Leu Asn Leu Leu Gln
                85                  90                  95
Glu Tyr Val Leu Ser Gln Ala Arg Glu Lys Leu Thr Glu Tyr Gln Ser
            100                 105                 110
Met Pro Ser Lys Glu Asn Phe Asn Tyr Leu Val Glu Glu Leu Glu Lys
        115                 120                 125
Leu Lys Gly Met Thr Ile Lys Lys Ser Asp Ala Thr Asp Ser Phe Leu
    130                 135                 140
Ala Glu Val Val Glu Asn Ile Leu Ser Asp Glu Pro Lys Gln Phe Ile
145                 150                 155                 160
Lys Thr Gly Ile Ala Ser Ile Asp Asn Lys Ile Ile Gly Phe Glu Pro
                165                 170                 175
Gly Gln Leu Asn Val Leu Gly Ala Arg Pro Ser Leu Gly Lys Thr Ser
            180                 185                 190
Leu Ala Leu Thr Met Met Trp Asn Ile Ala Gln Arg Gly Tyr Pro Thr
    195                 200                 205
Thr Phe Phe Ser Leu Glu Thr Gly Gly Asn Asn Ile Val Glu Arg Leu
    210                 215                 220
Val Ala Thr Ile Thr Asn Ile Pro Leu Ser Lys Ile Lys Gln Gly Asn
225                 230                 235                 240
Gly Leu Asn Asp Asp Glu Val Ser Ser Val Met Ser Ala Ile Asp Gln
                245                 250                 255
Ile Lys Lys Cys Asn Ser Leu Lys Ile Glu Asp Gln Ala Gln Met Thr
            260                 265                 270
Pro Gln Asp Val Arg Glu Val Ala Ser Gln Lys Ala Asp Lys Pro His
        275                 280                 285
Val Ile Phe Ile Asp Tyr Leu Thr Leu Met Gln Ser Asp Val Pro Gln
    290                 295                 300
Arg Asp Arg Arg Leu Glu Val Glu Lys Ile Ser Arg Asp Leu Lys Ile
305                 310                 315                 320
Ile Ala Lys Glu Thr Gly Cys Ile Ile Ile Ala Leu Ser Gln Leu Ser
                325                 330                 335
Arg Gly Val Glu Ser Arg Ser Asp Lys Arg Pro Met Met Ser Asp Leu
            340                 345                 350
Arg Glu Ala Gly Gly Ile Glu Gln Asp Ala Asn Met Ile Phe Phe Leu
    355                 360                 365
Tyr Arg Asp Asp Tyr Tyr Asp Gln Asp Gln Gln Asp Asn Ile Thr Gly
    370                 375                 380
Lys Ser Glu Ile Glu Phe Ile Ile Ser Lys Asn Lys Asp Gly Glu Thr
385                 390                 395                 400
Gly Val Ala His Leu Asp Phe Tyr Lys Lys Thr Gln Arg Phe Tyr Gly
                405                 410                 415
```

<210> 5398
<211> 414
<212> PRT
<213> S.epidermidis

<400> 5398
```
Glu Thr Ile Met Arg Asp Lys Phe Glu Ile Thr Phe Ile Lys Asn Arg
1               5                   10                  15
Arg Asp Leu Ile Met Ala Lys Glu Lys Phe Asp Arg Ser Lys Glu His
            20                  25                  30
Ala Asn Ile Gly Thr Ile Gly His Val Asp His Gly Lys Thr Thr Leu
        35                  40                  45
Thr Ala Ala Ile Ala Thr Val Leu Ala Lys Asn Gly Asp Thr Val Ala
    50                  55                  60
Gln Ser Tyr Asp Met Ile Asp Asn Ala Pro Glu Glu Lys Glu Arg Gly
65                  70                  75                  80
Ile Thr Ile Asn Thr Ala His Ile Glu Tyr Gln Thr Asp Lys Arg His
                85                  90                  95
Tyr Ala His Val Asp Cys Pro Gly His Ala Asp Tyr Val Lys Asn Met
        .   100                 105                 110
Ile Thr Gly Ala Ala Gln Met Asp Gly Gly Ile Leu Val Val Ser Ala
        115                 120                 125
Ala Asp Gly Pro Met Pro Gln Thr Arg Glu His Ile Leu Leu Ser Arg
    130                 135                 140
Asn Val Gly Val Pro Ala Leu Val Val Phe Leu Asn Lys Val Asp Met
145                 150                 155                 160
Val Asp Asp Glu Glu Leu Leu Glu Leu Val Glu Met Glu Val Arg Asp
                165                 170                 175
Leu Leu Ser Glu Tyr Asp Phe Pro Gly Asp Asp Val Pro Val Ile Ala
            180                 185                 190
Gly Ser Ala Leu Lys Ala Leu Glu Gly Asp Ala Glu Tyr Glu Gln Lys
            195                 200                 205
Ile Leu Asp Leu Met Gln Ala Val Asp Asp Tyr Ile Pro Thr Pro Glu
        210                 215                 220
Arg Asp Ser Asp Lys Pro Phe Met Met Pro Val Glu Asp Val Phe Ser
225                 230                 235                 240
Ile Thr Gly Arg Gly Thr Val Ala Thr Gly Arg Val Glu Arg Gly Gln
            245                 250                 255
Ile Lys Val Gly Glu Glu Val Glu Ile Ile Gly Met His Glu Thr Ser
            260                 265                 270
Lys Thr Thr Val Thr Gly Val Glu Met Phe Arg Lys Leu Leu Asp Tyr
        275                 280                 285
Ala Glu Ala Gly Asp Asn Ile Gly Ala Leu Leu Arg Gly Val Ala Arg
        290                 295                 300
Glu Asp Val Gln Arg Gly Gln Val Leu Ala Ala Pro Gly Ser Ile Thr
305                 310                 315                 320
Pro His Thr Lys Phe Lys Ala Glu Val Tyr Val Leu Ser Lys Asp Glu
            325                 330                 335
Gly Gly Arg His Thr Pro Phe Phe Thr Asn Tyr Arg Pro Gln Phe Tyr
            340                 345                 350
Phe Arg Thr Thr Asp Val Thr Gly Val Val Asn Leu Pro Glu Gly Thr
            355                 360                 365
Glu Met Val Met Pro Gly Asp Asn Val Glu Met Thr Val Glu Leu Ile
    370                 375                 380
Ala Pro Ile Ala Ile Glu Asp Gly Thr Arg Phe Ser Ile Arg Glu Gly
385         .       390                 395                 400
```

Gly Arg Thr Val Gly Ser Gly Val Val Thr Glu Ile Phe Glu
                405   410

<210> 5399
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5399
Tyr Leu Ile Ile Arg Asn Gln Ser Ile Glu Trp Ser Ala Gly Glu Gly
1   5   10   15
Phe Thr Cys Ile Arg Thr Thr Asn Asp Gln Arg Ser Lys Tyr Arg Val
            20   25   30
Glu Arg Arg Arg Arg Ile His Leu His Lys Asn His
        35   40

<210> 5400
<211> 158
<212> PRT
<213> S.epidermidis

<400> 5400
Val Lys Pro Met Lys Lys Ala Leu Ser Lys Lys Ala Glu Leu Asp Gln
1   5   10   15
Lys Leu Pro Ile Glu Asp Ala Leu Lys Gln Leu Ser Phe Phe Val Gln
            20   25   30
Gln Asp Cys Ser Asp Trp Glu Leu Asp Glu Pro Val Pro Pro Leu Pro
        35   40   45
Pro Ala Lys Asn Phe Lys Gly Pro Ile Gly Arg Tyr Glu Thr Val Leu
    50   55   60
Ala Ile Ile Lys Asp Lys Gln Pro Thr Val Arg Glu Leu Leu Gly Tyr
65   70   75   80
Leu Ser Ala Gly Gly Gly His Leu Thr Leu Ile Gly Thr Pro Glu Glu
                85   90   95
Ile Val Asp Glu Met Glu Gln Trp Phe Asn Glu Gly Val Ala Asp Gly
            100   105   110
Phe Asn Leu Met Pro Pro Ser Leu Pro His Ser Leu Glu Asp Phe Leu
        115   120   125
Lys Tyr Ile Ile Pro Glu Leu Gln Arg Arg Ala Leu Phe Lys Asn Ser
    130   135   140
Tyr Asn Gln Ser Thr Leu Arg Thr Leu Leu Asn Leu Asp Ser
145   150   155

<210> 5401
<211> 229
<212> PRT
<213> S.epidermidis

<400> 5401
Lys Gly Val Phe Cys Met Asn Tyr Phe Arg Tyr Lys Gln Phe Asn Lys
1   5   10   15
Asp Val Ile Thr Val Ala Val Gly Tyr Tyr Leu Arg Tyr Ala Leu Ser
            20   25   30
Tyr Arg Asp Ile Ser Glu Ile Leu Arg Glu Arg Gly Val Asn Val His
        35   40   45
His Ser Thr Val Tyr Arg Trp Val Gln Glu Tyr Ala Pro Ile Leu Tyr

```
        50                      55                      60
Gln Ile Trp Lys Lys Lys His Lys Lys Ala Tyr Asp Lys Trp Arg Ile
65                      70                      75                      80
Asp Glu Thr Tyr Ile Asn Ile Lys Gly Lys Trp Asn Tyr Leu Tyr Arg
                    85                      90                      95
Ala Ile Asp Ala Glu Gly His Thr Leu Asp Ile Trp Leu Arg Lys Gln
                100                     105                     110
Arg Asp Asn His Ser Ala Tyr Val Phe Ile Lys Arg Leu Ile Lys Gln
                115                     120                     125
Phe Gly Lys Ser Gln Lys Val Ile Thr Asp Gln Ala Pro Ser Thr Lys
                130                     135                     140
Val Ala Met Ala Lys Val Ile Lys Ala Phe Lys Leu Lys Pro Asp Cys
145                     150                     155                     160
His Cys Thr Ser Lys Tyr Leu Asn Asn Leu Ile Glu Gln Asp His Arg
                    165                     170                     175
His Ile Lys Val Arg Lys Thr Arg Tyr Gln Ser Ile Asn Thr Ala Lys
                180                     185                     190
Asn Thr Leu Lys Gly Ile Glu Cys Ile Tyr Ala Leu Tyr Lys Lys Asn
                195                     200                     205
Arg Arg Ser Leu Gln Ile Tyr Gly Phe Ser Pro Cys His Glu Ile Ser
                210                     215                     220
Ile Met Leu Ala Ser
225
```

<210> 5402
<211> 178
<212> PRT
<213> S.epidermidis

<400> 5402

```
Pro Leu Ile Ile Glu Gly Trp Phe Leu Met Leu Ile Asn Val Leu Asn
1                   5                       10                      15
Leu Asn Asp Ser Gln Asp Gly Asn Arg Ile Lys Gln Gly Asp Leu Ser
                20                      25                      30
His Met Arg Tyr Ile Leu Ser Asp Asn Asn Asn Glu Asp Leu Lys Leu
                35                      40                      45
Glu Gly Leu Pro Ala Lys Val Phe Leu Thr Asp Ser Thr Gly Val Lys
                50                      55                      60
Tyr Ile Tyr Asp Thr Thr Val Arg Gln Tyr Asp Asn Ala Tyr Val Cys
65                      70                      75                      80
Asp Val Val Ile Asn Gln Ile Ile Pro Ala Asn Thr Tyr Ser Leu Glu
                    85                      90                      95
Ile Trp Val Asp Asn Lys Tyr Val Phe Pro Ser Asp Asn Lys Ala Lys
                100                     105                     110
Ile Gln Val Thr Glu Ser Val Ile Gly Arg Gln Leu Ile Asn Thr Gln
                115                     120                     125
Asn His Asp Leu Trp Gln Glu Met Ile Glu Tyr Gly Val Lys Asn Gly
                130                     135                     140
Leu Ile Lys Asn Gln Thr Glu Ser Glu Glu Asn Phe Val Ile Gly Glu
145                     150                     155                     160
Asn Ala Pro Asn Asp Thr Thr Lys Ile Trp Ile Asp Thr Thr Gly Gly
                165                     170                     175
Asn Glu
```

<210> 5403

<211> 122
<212> PRT
<213> S.epidermidis

<400> 5403
Val Arg Ile Met Asn Lys Glu Gln Ile Leu Gln Leu Ile Glu Gln Glu
1   5   10   15
Leu Ile Gln Ala Asp Glu Ala Gln Thr Asp Thr Glu Phe Glu Lys His
                20   25   30
Met Tyr Ala Ile His Met Leu Thr Ser Leu Val Ser Ser His Gln Ser
            35   40   45
Arg Ser Thr Ile Glu Lys Leu Asn His Ser Lys Pro Met Asn Ser Asn
        50   55   60
Ile Lys Asp Asp Tyr Glu Met Lys Gln Gln Ser Ser Gln Lys His His
65   70   75   80
Val Thr Ala Ala Glu Ile Glu Ala Met Gly Gly Lys Val Pro Gln Ser
                85   90   95
Met Lys Lys His His Thr Ser Asn Asn Met Met Ile Thr Asp Asp Gln
            100   105   110
Val Gly Asn Gly Glu Ser Ile Phe Asp Phe
            115   120

<210> 5404
<211> 236
<212> PRT
<213> S.epidermidis

<400> 5404
Ala His Val Ile Met Ile Phe Phe His Met Cys Trp Asn Thr Ser Leu
1   5   10   15
Met Val Gln Tyr Ser Leu Ser Ile Leu Thr Phe Gly Glu Val Ile Met
                20   25   30
Asn Lys Pro Phe Ile Ala Ile Glu Gly Pro Ile Gly Val Gly Lys Ser
            35   40   45
Ser Leu Ala His Arg Leu Ser Lys Thr Phe Gly Phe Tyr Glu Glu Lys
        50   55   60
Glu Ile Val Asp Glu Asn Pro Phe Leu Ser Asp Phe Tyr Asp Asp Ile
65   70   75   80
Glu Lys Trp Ser Phe Gln Thr Glu Met Phe Phe Leu Cys Asn Arg Tyr
                85   90   95
Lys Gln Ile Arg Asp Ile Glu Ser Leu Asn Gln Gly Ile Val Ser Asp
            100   105   110
Tyr His Ile His Lys Asn Lys Ile Phe Ala Lys Asn Thr Leu Asp Ala
        115   120   125
Lys Glu Phe Asp Lys Phe Ser Arg Ile Phe Asp Ile Leu Thr Glu Asp
        130   135   140
Ile Glu Met Pro Asn Thr Ile Ile Phe Leu Asp Ala Asp Leu Asp Val
145   150   155   160
Leu Lys Ser Arg Ile Ala Gln Arg Asn Arg Ser Phe Glu Ser Gln Ile
                165   170   175
Glu Asp Asp Tyr Leu Leu Thr Leu Lys Lys Asp Tyr Leu Ala Tyr Tyr
            180   185   190
Glu Ser Leu Lys Asn Asp Gly Ala Asn Val Ile Arg Ile Asp Thr Ser
        195   200   205
Gln Gln Asp Phe Val Lys Asn Asp Tyr Asp Tyr Gln Asn Ile Leu Asn
        210   215   220

Leu Val Lys Pro Met Ile Gly Glu Asn Lys Asp Glu
225   230   235

<210> 5405
<211> 202
<212> PRT
<213> S.epidermidis

<400> 5405
Gly Val Val Ile Met Lys Arg Glu Phe Leu Arg Gly Leu Gly Val Glu
1   5   10   15
Glu Asp Ala Ile Gln Lys Ile Ile Asp Glu His His Glu Gly Leu Gln
            20   25   30
Ser Tyr Lys Glu Lys Val Glu Lys Val Asp Ser Leu Lys Glu Gln Leu
        35   40   45
Glu Thr Ala Asn Glu Glu Ile Lys Asn Arg Asp Asn Gln Ile Glu Glu
    50   55   60
Leu Lys Asn Asn Val Gly Asp Asn Asp Glu Leu Lys Gln Glu Leu Glu
65   70   75   80
Lys Tyr Lys Glu Gln Asn Ala Asn Tyr Asp Gln Lys Leu Lys Asp Val
            85   90   95
Gln Leu Asn Lys Ala Ile Glu Val Ser Leu Ala Lys Glu Lys Ala Ile
            100   105   110
Lys Pro Glu Gln Val Ile Lys Leu Ile Asp Lys Asp Asn Leu Glu Val
        115   120   125
Asp Asp Asn Gly Asn Val Lys Gly Leu Asp Asp Tyr Met Ser Glu Phe
    130   135   140
Lys Lys Glu Asn Glu His Leu Phe Glu Gln Ser Lys Pro Ser Gly Arg
145   150   155   160
Thr Pro Asp Asp Gly Lys Asn Val Asn Gly Gly Ile Thr Gln Glu Glu
            165   170   175
Phe Asn Asn Met Ser Val Ala Glu Arg Thr Asn Leu Phe Val Asn Asp
            180   185   190
Arg Lys Thr Tyr Asp Thr Leu Ile Asn Asn
        195   200

<210> 5406
<211> 228
<212> PRT
<213> S.epidermidis

<400> 5406
Met Val Val Ile Lys Asn Tyr Ile Thr Glu Asp Asp Gly Thr Thr Thr
1   5   10   15
Val Val Ile Lys Gly Val Glu Leu Asp Asn Lys Thr Ser Leu Leu Leu
            20   25   30
Asp Asn Gly Tyr Glu Val Glu Val Asp Val Arg Val Val Asp Pro Phe
        35   40   45
Lys Ile Thr Asp Lys Gln Arg Arg Lys Val Phe Ala Leu Cys Asn Asp
    50   55   60
Ile Glu Cys Ala Thr Gly Gln Pro Arg Asp Tyr Met Arg Tyr Met Phe
65   70   75   80
Met Asp Tyr Val Glu Val Leu Tyr Gly Tyr Glu Lys Arg Leu Ser Leu
            85   90   95
Ser Asn Cys Thr Arg Glu Gln Ala Ser Gln Ile Ile Glu Val Ile Ile
            100   105   110

```
Asp Trp Val Phe His Asn Asn Ile Pro Leu Asn Tyr Lys Thr Ser Asp
        115                 120                 125
Leu Leu Lys Asn Asp Lys Ala Phe Leu Tyr Trp Ser Thr Val Asn Arg
    130                 135                 140
Lys Cys Val Ile Cys Gly Lys Pro Gly Glu Leu Ala His His Lys Ala
145                 150                 155                 160
Ile Gly Arg Gly Ala Asn Arg Lys Lys Met Asp His Tyr Gly Tyr Glu
                165                 170                 175
Val Leu Ala Leu Cys Arg Glu His His Gln Ser Gln His Asp Met Gly
                180                 185                 190
Val Glu Thr Phe Asp Lys Leu His His Leu Glu Asn Ser Trp Leu Ser
        195                 200                 205
Val Asp Glu Arg Leu Asn Lys Met Leu Lys Gly Val Lys Asn Glu Phe
        210                 215                 220
Glu Ser Asn Asn
225


<210> 5407
<211> 192
<212> PRT
<213> S.epidermidis


<400> 5407
Arg Cys Lys Ile Met Lys Gly Leu Ile Ile Ile Gly Ser Ala Gln Val
1               5                   10                  15
Gly Ser His Thr Asn Ala Leu Ser Lys Tyr Leu Lys Gly Gln Leu Gly
            20                  25                  30
Glu His Asp Val Glu Val Glu Ile Phe Asp Leu Ala Glu Lys Pro Ile
        35                  40                  45
His Gln Leu Asp Phe Ala Gly Thr Thr Gln Ala Val Asp Glu Ile Lys
    50                  55                  60
Asn Asn Val Lys Ser Leu Gln Ser Lys Ala Met Glu Ala Asp Phe Leu
65                  70                  75                  80
Ile Leu Gly Thr Pro Asn Tyr His Gly Ser Phe Ser Gly Ile Leu Lys
                85                  90                  95
Asn Ala Leu Asp His Leu Asn Met Asp His Phe Lys Met Lys Pro Val
            100                 105                 110
Gly Leu Ile Cys Asn Ser Gly Gly Ile Val Ser Ser Glu Pro Leu Ser
        115                 120                 125
His Leu Arg Val Ile Val Arg Ser Leu Leu Gly Ile Ala Val Pro Thr
    130                 135                 140
Gln Ile Ala Thr His Asp Ser Asp Tyr Ala Lys Leu Glu Asp Gly Thr
145                 150                 155                 160
Leu Tyr Leu Glu Asp Asn Glu Phe Gln Leu Arg Ala Lys Leu Phe Val
                165                 170                 175
Asp Gln Ile Val Ser Phe Val Thr Asn Ser Pro Tyr Glu His Leu Lys
                180                 185                 190


<210> 5408
<211> 60
<212> PRT
<213> S.epidermidis


<400> 5408
Tyr Lys Lys Ile Thr Leu Lys Asp Gly Leu Leu Phe Lys Lys Met Phe
1               5                   10                  15
```

Ile Glu Thr Glu Asp Phe Met Phe Asn Tyr Ser Thr Ser Lys Ala Leu
       20   25   30

Leu Ser Asp Phe Gln Asn Asn Asn Phe Asn Tyr Phe Ile Gln Asn Lys
       35   40   45

Lys Glu Arg Val Ile Phe Glu Asp Gly His Phe Leu
       50   55   60

<210> 5409
<211> 225
<212> PRT
<213> S.epidermidis

<400> 5409
Leu Glu Lys Ile Lys Met Asn Asn Tyr Gly Ile Pro Gln Asn Ala Val
1   5   10   15

Ile Thr Ile Ala Gly Thr Val Gly Val Gly Lys Ser Thr Leu Thr Gln
       20   25   30

Ala Leu Ala Asp Lys Leu Asn Phe Lys Thr Ser Phe Glu Asn Val Asp
       35   40   45

His Asn Pro Tyr Leu Asp Lys Phe Tyr His Asn Phe Glu Arg Trp Ser
       50   55   60

Phe His Leu Gln Ile Tyr Phe Leu Ala Glu Arg Phe Lys Glu Gln Lys
65   70   75   80

Arg Met Phe Glu Tyr Gly Gly Gly Phe Val Gln Asp Arg Ser Ile Tyr
       85   90   95

Glu Asp Val Asp Ile Phe Ala Lys Met His Glu Glu Gln Gly Thr Met
       100   105   110

Ser Ala Asp Asp Tyr His Thr Tyr Tyr Glu Leu Phe Asn Ala Met Val
       115   120   125

Met Thr Pro Tyr Phe Pro Lys Pro Asp Val Leu Ile Tyr Leu Glu Cys
       130   135   140

Asp Tyr Asp Glu Val Ile Asp Arg Ile Gln Gln Arg Gly Arg Asp Met
145   150   155   160

Glu Ile Asn Thr Asp Pro Glu Tyr Trp Lys Lys Leu Phe Lys Arg Tyr
       165   170   175

Glu Asn Trp Ile Asn Asn Phe Asn Ala Cys Pro Val Val Arg Leu Asn
       180   185   190

Ile Asn Glu Tyr Asp Ile His Glu Asp Val Asp Ser Leu Asp Ser Val
       195   200   205

Ile Asp Lys Ile Ala Gln Val Ile Lys Ala Tyr Arg Gln Val Asp Thr
       210   215   220

Arg
225

<210> 5410
<211> 901
<212> PRT
<213> S.epidermidis

<400> 5410
Ile Asn Glu Ile Gly Gly Asn Val Leu Ala Lys Leu Leu Tyr Lys Leu
1   5   10   15

Gly Lys Phe Ile Ala Lys Asn Lys Trp Leu Ser Val Ile Gly Trp Leu
       20   25   30

Val Ile Leu Gly Val Ile Ile Thr Pro Leu Met Ile Asn Ser Pro Lys
       35   40   45

```
Phe Asp Ser Asp Ile Thr Met Asn Gly Leu Lys Ser Leu Asp Thr Asn
    50                  55                  60
Asp Lys Ile Ser Lys Glu Phe His Gln Asp Ser Glu Lys Ala Ser Met
65                  70                  75                  80
Lys Ile Val Phe His Ser Asn Lys Asn Asp Gly Leu Asn Asn Lys Asp
                85                  90                  95
Thr Lys Lys Asp Ile Glu Asp Ala Leu Asp Asn Ile Arg Gln Asn Asp
                100                 105                 110
Asp Tyr Ile Gln Asn Ile Ser Asn Pro Tyr Asp Ser Gly Gln Val Asn
        115                 120                 125
Asp Glu Gly Asp Thr Ala Ile Ala Asn Val Ser Tyr Val Val Pro Gln
    130                 135                 140
Thr Gly Leu Lys Asp Ser Ser Lys His Ile Ile Asp Lys Glu Leu Lys
145                 150                 155                 160
Asp Val Thr Asp Asn His Asn Val Gln Ile Glu Lys Thr Gln Gly Gly
                165                 170                 175
Ala Met Asn Ser Glu Pro Gly Gly Thr Ser Glu Ile Val Gly Ile Ile
                180                 185                 190
Val Ala Phe Val Ile Leu Leu Ile Thr Phe Gly Ser Leu Ile Ala Ala
        195                 200                 205
Gly Met Pro Ile Ile Ser Ala Ile Ile Gly Leu Gly Ser Ser Val Gly
    210                 215                 220
Ile Ile Ala Leu Leu Thr Tyr Ile Phe Asp Ile Pro Asn Phe Thr Leu
225                 230                 235                 240
Thr Leu Ala Val Met Ile Gly Leu Ala Val Gly Ile Asp Tyr Ser Leu
                245                 250                 255
Phe Ile Leu Phe Arg Phe Lys Glu Leu Lys Lys Lys Gly Val Asp Thr
                260                 265                 270
Val Glu Ala Ile Ala Thr Ala Val Gly Thr Ala Gly Ser Ala Val Ile
        275                 280                 285
Phe Ala Gly Leu Thr Val Met Ile Ala Val Cys Gly Leu Ser Leu Val
    290                 295                 300
Gly Ile Asp Phe Leu Ala Val Met Gly Phe Ala Ser Ala Ile Ser Val
305                 310                 315                 320
Leu Phe Ala Val Leu Ala Ala Leu Thr Leu Leu Pro Ala Leu Ile Ser
                325                 330                 335
Ile Phe His Lys Ser Ile Lys Ile Lys Asp Lys Pro Thr Lys Ser Lys
                340                 345                 350
Asp Pro Lys Asp His Ser Trp Ala Lys Phe Ile Val Gly Lys Pro Val
        355                 360                 365
Ile Ala Val Ile Val Ser Leu Ile Ile Leu Ile Leu Ala Ala Ile Pro
    370                 375                 380
Val Ser Gly Met Arg Leu Gly Ile Pro Asp Asp Ser Leu Lys Pro Thr
385                 390                 395                 400
Asp Ser Ser Glu Tyr Lys Ala Tyr Lys Leu Ile Ser Asp Asn Phe Gly
                405                 410                 415
Glu Gly Tyr Asn Gly Gln Ile Val Met Leu Val Asn Thr Lys Asp Gly
                420                 425                 430
Gly Ser Lys Ser Thr Ile Glu Arg Asp Leu Asn Asn Met Arg Ser Asp
        435                 440                 445
Leu Glu Asp Ile Asp Asn Val Asp Thr Val Ser Lys Ala Gln Leu Thr
    450                 455                 460
Asp Asn Asn Asn Tyr Ala Leu Phe Thr Ile Ile Pro Glu Lys Gly Pro
465                 470                 475                 480
Asn Ser Gln Ser Thr Glu Asn Leu Val Tyr Asp Leu Arg Asp·Tyr His
                485                 490                 495
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Ser Gln Ala Gln Glu Lys Tyr Asp Tyr Gly Thr Glu Ile Ser Gly Gln
            500                     505                 510
Ser Val Ile Asn Ile Asp Met Ser Glu Lys Leu Asn Asn Ala Ile Pro
            515                     520                 525
Val Phe Ala Gly Val Ile Val Val Leu Ala Phe Phe Leu Leu Met Ile
            530                     535                 540
Val Phe Arg Ser Ile Leu Val Pro Leu Lys Ala Val Leu Gly Phe Ile
545                     550                 555                 560
Leu Ser Leu Met Ala Thr Leu Gly Phe Thr Thr Leu Val Ile Gln His
                565                     570                 575
Gly Phe Met Gly Ser Leu Phe Gly Ile Glu Asn Thr Gly Pro Leu Leu
            580                     585                 590
Ala Phe Leu Pro Val Ile Thr Ile Gly Leu Leu Phe Gly Leu Ala Ile
            595                     600                 605
Asp Tyr Glu Leu Phe Leu Met Thr Arg Val His Glu Glu Tyr Ser Lys
            610                     615                 620
Thr Gly Asp Asn Asp His Ser Ile Arg Val Gly Ile Lys Glu Ser Gly
625                     630                 635                 640
Pro Val Ile Val Ala Ala Ala Leu Ile Met Phe Ser Val Phe Ile Ala
                645                     650                 655
Phe Val Phe Gln Asp Asp Ser Ala Ile Lys Ser Met Gly Ile Ala Leu
            660                     665                 670
Gly Phe Gly Val Leu Phe Asp Ala Phe Val Val Arg Met Thr Leu Ile
            675                     680                 685
Pro Ala Leu Thr Lys Leu Phe Gly Lys Ala Ser Trp Tyr Leu Pro Lys
            690                     695                 700
Trp Leu Gly Ala Val Leu Pro Asn Val Asp Val Glu Gly Lys Ala Leu
705                     710                 715                 720
Glu Glu Asp Asn His His Asp Thr Ser Ser Glu Lys Gly His Val Asn
                725                     730                 735
Asp Lys Asn Ser Glu Tyr Ser Arg Gln Asp Lys Asp Asn Tyr Val Tyr
            740                     745                 750
Gln Asn Asp Lys Arg Asn Tyr Asn Arg Asn Tyr Asn Asp Glu Asp Tyr
            755                     760                 765
Asn Arg Ser Val His Leu Asn Asn His His Asp Gln His His Arg Gln
770                     775                 780
His Gln Tyr Asp Asn Gln Arg Asp Asp Ile Asp Tyr Glu Ser Leu Tyr
785                     790                 795                 800
Thr Gln Asp Gly Asp His Thr His His Asp Glu Arg Asn Tyr Asn Asp
            805                     810                 815
Arg His Tyr Gln Asp Asn Tyr Asp Arg Asn Asp Asp Tyr Arg His Asn
            820                     825                 830
Asn His Asp His Gln Asn Asp Asn His Asp Tyr His Asp Ser Asn Phe
            835                     840                 845
Asp Lys Thr Thr Asn Leu Tyr Lys Glu Leu Thr Asp Ser Asn Ile Asp
850                     855                 860
Gln Asp Val Leu Phe Lys Ala Leu Met Leu Tyr Ala Arg Glu Asn Asn
865                     870                 875                 880
Lys Gly Val Tyr Asp Arg Tyr Asn Arg Ser Ser Gln His Arg His Asp
                885                     890                 895
Asp Glu Leu Arg Asp
            900
```

```
<210> 5411
<211> 169
<212> PRT
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<213> S.epidermidis

<400> 5411
Val Glu Glu Ile Arg Pro Ile Thr Tyr Gln Asp Lys Glu Ala Tyr Tyr
1   5   10   15
Tyr Tyr Ile Gln Glu Trp Tyr Glu Asn Glu Glu Lys Val Val Pro Gly
            20   25   30
Asn Thr Asp Ile Ala Asn Tyr Ser Ser Phe Asn Asn Met Val Asp Arg
            35   40   45
Leu Asn Cys Ser Glu Val Asp Glu Gly Phe Val Pro Thr Thr Thr Leu
        50   55   60
Phe Tyr Phe Lys Asp Ser Ile Ile Ile Gly Ala Val Asp Ile Arg His
65   70   75   80
Gln Leu Asn Asp Lys Leu Ser Asn Ile Gly Gly His Val Gly Tyr Gly
                85   90   95
Val Ala Lys Ser Tyr Arg Gly Lys Gly Tyr Ala Thr Ile Leu Leu Glu
                100   105   110
Lys Ala Leu Asp Glu Leu Lys Thr Leu Asn Val Glu Val Val Leu Met
        115   120   125
Thr Cys Asn Pro Leu Asn Phe Ala Ser Gln Thr Val Met Lys Lys Cys
        130   135   140
Gly Gly Tyr Gln Ile Glu Ser Tyr Ile Lys Lys Asn Gly Lys Pro Val
145   150   155   160
His Arg Tyr His Ile Pro Asn Thr Lys
                165

<210> 5412
<211> 355
<212> PRT
<213> S.epidermidis

<400> 5412
Lys Leu Arg Ile Gln Leu Leu Leu Glu Leu Leu Ile Met Ile Asn Gln
1   5   10   15
Val Tyr Gln Leu Val Ser Pro Arg Gln Phe Glu Ala Thr Phe Lys Thr
            20   25   30
Ile Asp Leu His Asn His Asn Ser Lys Val Ile Val Arg Pro Leu Tyr
            35   40   45
Leu Ser Ile Cys Ala Ala Asp Leu Arg Tyr Tyr Cys Gly Asn Arg Asp
        50   55   60
Ser Lys Ile Leu Ser Lys Lys Leu Pro Met Ser Leu Ile His Glu Ser
65   70   75   80
Val Gly Glu Ile Val Tyr Asp Ser Glu His Arg Leu Lys Asn Gly Thr
                85   90   95
Lys Val Val Met Ile Pro Asn Thr Pro Ser Lys Ser His Asn Ile Ile
                100   105   110
Ala Glu Asn Tyr Leu Thr Ser Ser His Phe Lys Ser Ser Gly Tyr Asp
            115   120   125
Gly Phe Met Gln Asp Tyr Ile Val Met Lys Pro Asp Arg Val Val Thr
        130   135   140
Leu Pro Gln Glu Ile Asp Leu Ser Val Ala Ser Tyr Thr Glu Leu Val
145   150   155   160
Thr Val Ser Val His Ala Ile Asp Arg Phe Gln Ser Lys Ala Ile Pro
                165   170   175
Gln Phe Glu Ser Leu Gly Ile Trp Gly Asp Gly Asn Leu Gly Tyr Ile
            180   185   190

```
Thr Ala Val Leu Leu Lys Lys Leu Tyr Pro Thr Thr Lys Ile Ile Val
        195                     200                 205
Phe Gly Lys Thr Leu Tyr Lys Leu Ser Arg Phe Ser Phe Val Asp Glu
        210                     215                 220
Ile Ile Gln Ile Asp Asn Ile Pro Gln His Ile Lys Ile Asp His Ala
225                     230                 235                 240
Phe Glu Cys Val Gly Gly Lys Gly Ser Gln Gln Ala Ile Glu Gln Ile
            245                     250                 255
Ile Asn Ile Ile Asn Pro Glu Gly Ser Ile Ala Leu Leu Gly Val Ser
            260                     265                 270
Glu Leu Pro Ile Gln Val Asn Thr Arg Met Val Leu Glu Lys Gly Leu
        275                     280                 285
Thr Ile Ile Gly Ser Ser Arg Ser Gly Leu Lys Asp Phe Glu Lys Thr
        290                     295                 300
Ile Glu Leu Tyr Arg Lys Tyr Pro Glu Val Leu Asn Gln Leu Ala Leu
305                     310                 315                 320
Leu Lys Gly Lys Glu Phe Glu Ile Asn Thr Ile Glu Asp Leu Ile Thr
            325                     330                 335
Ala Phe Glu Tyr Asp Ile Ser Asn Ala Trp Gly Lys Thr Val Leu Lys
            340                     345                 350
Trp Asn Ile
        355
```

<210> 5413
<211> 147
<212> PRT
<213> S.epidermidis

<400> 5413
```
Ile Arg Arg Ile Arg Met Thr Asn Leu Thr Ile Leu Thr Gly Arg Ile
1               5                   10                  15
Thr Lys Asp Leu Glu Leu Lys Gln Ala Gly Gln Thr Gln Val Thr Asn
            20                  25                  30
Phe Ser Met Ala Val Asp Asn Pro Phe Lys Lys Asp Asp Thr Ser Phe
            35                  40                  45
Phe Asp Ile Val Ala Phe Gly Lys Thr Ala Gln Leu Leu Asn Asp Tyr
        50                  55                  60
Cys Gly Lys Gly Ser Lys Val Leu Ile Glu Gly Asn Leu Lys Gln Asp
65                  70                  75                  80
Arg Phe Gln Asp Lys Glu Gly His Asn Arg Ser Val Val Arg Val Ile
                85                  90                  95
Ala Asn Arg Ile Glu Phe Leu Asp Ser Lys Gly Ser Asn Gln Gln Asn
            100                 105                 110
Asn Gln Pro Gln Lys Gln Gln Glu Gln Thr Thr Glu Thr Lys Ser Lys
        115                 120                 125
Asn Pro Phe Ala Asn Ala Ser Gly Pro Ile Asp Ile Thr Asp Asp Met
        130                 135                 140
Leu Pro Phe
145
```

<210> 5414
<211> 247
<212> PRT
<213> S.epidermidis

<400> 5414

```
Arg Cys Leu Ile Leu Lys Ile Ile Asn Leu Asp Ser Lys Asn Leu Ala
1               5                   10                  15
Ser Phe Tyr Val Ala Cys Glu Leu Phe Lys Gln Ile Gln Gln His Pro
            20                  25                  30
His Ala Lys Leu Gly Leu Ala Thr Gly Gly Thr Met Thr Asp Val Tyr
        35                  40                  45
His Tyr Leu Val Asn Leu Leu Ile Lys Asn Lys Val Asp Val Ser Gln
    50                  55                  60
Val Glu Thr Phe Asn Leu Asp Glu Tyr Val Gly Leu Lys Ala Ser His
65                  70                  75                  80
Gln Gln Ser Tyr His Thr Tyr Met Asn Lys Val Leu Phe Glu Gln Tyr
            85                  90                  95
Pro His Phe Val Lys Asn His Ile His Ile Pro Asp Gly Leu Ser Glu
            100                 105                 110
Asn Leu Glu Ala Glu Ala Glu Arg Tyr Asn Asn Leu Leu Asp Glu Arg
        115                 120                 125
Gly Pro Ile Asp Ile Gln Ile Leu Gly Ile Gly Glu Asn Gly His Ile
    130                 135                 140
Gly Phe Asn Glu Pro Gly Thr Asp Phe Asn Ser Glu Thr His Val Val
145                 150                 155                 160
Asn Leu Thr Glu Ser Thr Ile Lys Ala Asn Ser Arg Phe Phe Asp Asn
            165                 170                 175
Glu Lys Asp Val Pro Arg Gln Ala Val Ser Met Gly Val Lys Ser Ile
            180                 185                 190
Leu Lys Ala Lys Arg Ile Ile Leu Leu Ala Phe Gly Pro Lys Lys Lys
    195                 200                 205
Glu Ala Ile Ser Lys Leu Leu Asn Glu Gln Val Thr Glu Asp Val Pro
    210                 215                 220
Ala Thr Ile Leu His Thr His Pro Asn Val Glu Val Tyr Val Asp Asp
225                 230                 235                 240
Glu Ala Ala Pro Asp Cys Leu
            245
```

```
<210> 5415
<211> 269
<212> PRT
<213> S.epidermidis
```

```
<400> 5415
Leu Phe Val Ile Glu Phe Asp Met Asn Pro Ile Lys Ile Leu Lys Lys
1               5                   10                  15
Glu Arg Ile Ile Met Ser Glu Ala Ala Glu Thr Leu Asp Gly Trp Tyr
            20                  25                  30
Ser Leu His Leu Phe Tyr Ala Val Asp Trp Thr Thr Phe Arg Leu Ile
        35                  40                  45
Ala Glu Asp Asp Arg Glu Ala Met Ile Thr Glu Leu Glu Thr Phe Ile
    50                  55                  60
Lys Asp Lys Thr Val Ala Arg Glu Ser His Gln Gly Asp His Ala Ile
65                  70                  75                  80
Tyr Asn Ile Thr Gly Gln Lys Ala Asp Leu Leu Leu Trp Phe Leu Arg
            85                  90                  95
Pro Glu Met Lys Glu Leu Asn Gln Ile Glu Asn Glu Phe Asn Lys Leu
            100                 105                 110
Arg Ile Ala Asp Tyr Leu Ile Pro Thr Tyr Ser Tyr Val Ser Val Ile
    115                 120                 125
Glu Leu Ser Asn Tyr Leu Ala Gly Lys Ser Asp Glu Asp Pro Tyr Glu
```

```
         130                    135                    140
Asn Pro His Val Lys Ala Arg Leu Tyr Pro Glu Leu Pro His Ser Glu
145                    150                    155                    160
Tyr Ile Cys Phe Tyr Pro Met Asp Lys Arg Arg Asn Glu Thr Tyr Asn
                       165                    170                    175
Trp Tyr Met Leu Pro Ile Glu Asp Arg Lys Thr Leu Met Tyr Asn His
                  180                    185                    190
Gly Met Ile Gly Arg Lys Tyr Ala Gly Lys Ile Lys Gln Phe Ile Thr
             195                    200                    205
Gly Ser Val Gly Phe Asp Asp Tyr Glu Trp Gly Val Thr Leu Phe Ser
             210                    215                    220
Asn Asp Val Leu Gln Phe Lys Lys Ile Val Tyr Glu Met Arg Phe Asp
225                    230                    235                    240
Glu Thr Thr Ala Arg Tyr Gly Glu Phe Gly Ser Phe Tyr Ile Gly His
                  245                    250                    255
Ile Leu Asn Ile Glu Asp Phe Lys Gln Phe Phe Ser Ile
             260                    265
```

<210> 5416
<211> 193
<212> PRT
<213> S.epidermidis

<400> 5416

```
Glu Asn Gln Ile Met Pro Ser Ala Asn Gln Lys Arg Met Ile Lys His
1                   5                   10                   15
Ile His Glu Thr Val Phe Ile Leu Leu His Asp Tyr His Phe Asp Glu
                  20                   25                   30
Ile Thr Val Gln Lys Ile Cys Asp Ile Ala Glu Ile Asn Arg Ser Thr
             35                   40                   45
Phe Tyr Arg Tyr Phe Gln Asp Lys Tyr Glu Leu Leu Tyr Thr Leu Pro
       50                   55                   60
Asp Phe Ile Thr Gln Gln Ile Ile Ala Lys Ser Asp Thr Ser Ala Asp
65                   70                   75                   80
Ile Thr Thr Pro Glu Ser Phe Glu Asp Phe Ile Tyr Tyr Ile Gly Asn
                  85                   90                   95
Asn Lys Lys Ile Phe Lys His Leu Leu Val Ser Ser Arg Gln Ala Asp
             100                   105                   110
Val Phe Arg Ser Leu Thr Asn Val Ser Arg Glu Met Met Leu Asn Asn
             115                   120                   125
Pro Thr Arg Lys Arg Ala Pro Leu Ala Gln Lys Ile Arg Glu Ser Lys
       130                   135                   140
His Pro Glu Ile Val Ala Asp Phe Tyr Ser Ser Gly Val Ile Glu Val
145                   150                   155                   160
Leu Arg Arg Trp Val Glu Asn Asp Tyr Asn Tyr Thr Val Glu Glu Val
                  165                   170                   175
Phe Val Thr Leu Asn Asn Val Leu Glu Thr Ser Leu Tyr Cys Tyr Asp
             180                   185                   190
Lys
```

<210> 5417
<211> 437
<212> PRT
<213> S.epidermidis

<400> 5417

```
Cys Gly Gln Ile Asn Asn Lys Ser Lys Arg Leu Arg Trp Cys Ile Ser
1                   5                   10                  15
Met Met Ile Ser Ile Lys Leu Ser Glu Leu Leu Pro Lys His Phe His
                20                  25                  30
Ser Leu Trp Lys Ala Thr Lys Asp Arg Glu Lys Leu Asn Ile Val Ala
        35                  40                  45
Lys Gly Gly Arg Gly Ser Gly Lys Ser Ser Asp Ile Ser Ile Ile Ile
    50                  55                  60
Thr Gln Leu Ile Met Arg Tyr Pro Met Asn Ala Val Val Val Arg Lys
65                  70                  75                  80
Thr Asp Asn Thr Leu Ala Thr Ser Val Phe Glu Gln Ile Lys Trp Ala
                85                  90                  95
Ile Glu Glu Gln Lys Val Ser His Leu Phe Lys Val Lys Val Ser Pro
        100                 105                 110
Met Glu Ile Thr Tyr Val Pro Arg Gly Asn Arg Ile Ile Phe Arg Gly
        115                 120                 125
Ala Gln Asn Pro Glu Arg Leu Lys Ser Leu Lys Asp Ser Arg Phe Pro
    130                 135                 140
Phe Ser Ile Met Trp Ile Glu Glu Leu Ala Glu Phe Lys Thr Glu Asp
145                 150                 155                 160
Glu Val Thr Thr Ile Thr Asn Ser Met Leu Arg Gly Glu Leu Asp Asp
                165                 170                 175
Gly Leu Phe Tyr Lys Phe Phe Phe Ser Tyr Asn Pro Pro Lys Arg Lys
        180                 185                 190
Gln Ser Trp Val Asn Lys Lys Tyr Glu Thr Ser Phe Gln Pro Asp Asn
        195                 200                 205
Thr Phe Val His His Ser Thr Tyr Leu Asp Asn Pro Phe Ile Ser Lys
    210                 215                 220
Gln Phe Ile Gln Glu Ala Glu Ser Ala Lys Glu Arg Asn Glu Gln Arg
225                 230                 235                 240
Tyr Arg Trp Glu Tyr Met Gly Glu Ala Ile Gly Ser Gly Val Val Pro
                245                 250                 255
Phe Asn Asn Leu Gln Ile Glu Lys Ile Pro Asp Glu Leu Tyr Asp Asn
                260                 265                 270
Phe Asp Asn Ile Arg Asn Gly Ala Asp Phe Gly Tyr Ala Ala Asp Pro
        275                 280                 285
Leu Ala Phe Thr Arg Trp His Tyr Asp Lys Lys Lys Arg Ile Leu Tyr
    290                 295                 300
Ala Met Asp Glu Ile Tyr Gly Val Gln Met Ser Asn Arg Glu Phe Ala
305                 310                 315                 320
Lys Glu Leu Trp Lys Arg Gly Tyr Gln Ser Asp Glu Ile Tyr Cys Asp
                325                 330                 335
Ser Ala Glu Pro Lys Ser Ile Asp Glu Leu Lys Lys Glu His Gly Ile
        340                 345                 350
Lys Arg Val Lys Gly Val Lys Lys Gly Pro Asp Ser Val Glu Tyr Gly
    355                 360                 365
Glu Gln Trp Leu Asn Asp Leu Asp Ala Ile Val Ile Asp Pro Asn Arg
    370                 375                 380
Thr Pro Asn Ile Ala Arg Glu Phe Glu Asn Ile Asp Tyr Glu Thr Asp
385                 390                 395                 400
Lys Asp Gly Asn Val Lys Pro Arg Leu Glu Asp Lys Asp Asn His Ser
                405                 410                 415
Ile Asp Ser Cys Arg Tyr Ala Leu Ser Arg Asp Met Arg Gln Asn Lys
        420                 425                 430
Leu Ser Ile Leu Thr
```

435

<210> 5418
<211> 427
<212> PRT
<213> S.epidermidis

<400> 5418
```
Leu Glu Gly Ile Lys Val Lys Thr Gln Val Leu Tyr Gly Lys Ser Glu
1               5                   10                  15
Ile Glu Ile Asn Val Pro Asp Asp Ser Thr Ile Ile Glu Pro Gln Asn
            20                  25                  30
Ile Asp Ala Ile Gln Asp Tyr Glu Ser Thr Ile Lys Asn Val Leu Arg
        35                  40                  45
Asn Pro Thr Asn Ser Lys Pro Leu Lys Glu Met Val Asn Ser Asn Asp
    50                  55                  60
Ile Val Ser Ile Val Ile Ser Asp Ile Thr Arg Pro Thr Pro Asn His
65                  70                  75                  80
Ile Leu Val Pro Leu Leu Ile Glu Glu Leu Asn His Val Pro Arg Glu
                85                  90                  95
Asn Phe Val Ile Ile Asn Gly Thr Gly Thr His Arg Asp Gln Thr Arg
            100                 105                 110
Asp Glu Leu Ile Gln Met Leu Gly Glu Asp Ile Val Asn Ser Val Lys
        115                 120                 125
Ile Val His Asn His Cys Ser Glu Lys Glu Ser Leu Ala Lys Val Gly
    130                 135                 140
His Ser Gln Tyr Gly Cys Asp Val Tyr Leu Asn Lys Ala Tyr Val Glu
145                 150                 155                 160
Ser Asp Phe Lys Ile Val Thr Gly Phe Ile Glu Pro His Phe Phe Ala
                165                 170                 175
Gly Phe Ser Gly Gly Pro Lys Gly Ile Met Pro Gly Ile Ala Gly Leu
            180                 185                 190
Glu Thr Ile Gln Thr Phe His Asn Ala Lys Met Ile Gly Asp Pro Arg
            195                 200                 205
Ser Thr Trp Gly Asn Leu Glu Asp Asn Pro Val Gln Asp Met Ala Arg
    210                 215                 220
Glu Val Asn Arg Met Cys Lys Pro Asp Phe Leu Leu Asn Val Ala Leu
225                 230                 235                 240
Asn Lys Ser Lys Glu Ile Thr Ala Ala Phe Ala Gly Glu Ile Leu Asp
                245                 250                 255
Thr His Lys Glu Gly Cys Ala Tyr Val Lys Asp His Ala Met Phe Lys
            260                 265                 270
Cys Glu Gln Arg Phe Asp Ile Val Ile Ala Ser Asn Ser Gly Tyr Pro
            275                 280                 285
Leu Asp Gln Asn Leu Tyr Gln Thr Val Lys Gly Met Ser Ala Ala Ser
    290                 295                 300
Lys Val Val Lys Lys Asp Gly His Ile Ile Met Val Ser Glu Cys Ala
305                  310                 315                 320
Asp Gly Phe Pro Asp His Gly Lys Phe Ala Glu Ile Phe Lys Met Ala
            325                 330                 335
Asp Thr Pro Gln Gly Ile Leu Glu Leu Ile His Asn Pro Asn Phe Lys
            340                 345                 350
Glu Val Asp Gln Trp Gln Val Gln Lys Gln Ala Ser Ile Gln Thr Phe
            355                 360                 365
Ala Asn Val His Val Tyr Ser Glu Leu Thr Asp Gln Gln Leu Lys Asp
    370                 375                 380
```

```
Ser Met Leu Ile Pro Thr Ser Asn Ile Glu His Thr Ile Gln Glu Leu
385                 390                 395                 400
Glu His Arg Tyr Gly Arg Lys Leu Thr Ile Gly Val Met Pro Gln Gly
                405                 410                 415
Pro Leu Thr Ile Pro Tyr Val Glu Asp Lys Glu
            420                 425
```

<210> 5419
<211> 111
<212> PRT
<213> S.epidermidis

<400> 5419
```
Leu Val Val Phe Ile Leu Ser Glu Val Gly Val Tyr Met Thr Glu Ser
1               5                   10                  15
Ser Gln Arg Gly Asp Tyr Glu Arg Arg Ile Lys Arg Leu Glu Asp Asn
            20                  25                  30
Asp Glu Lys Ile Phe Asn Ser Leu Glu Gln Ile Lys Asp Gly Gln His
            35                  40                  45
Asn Gln Asn Leu Ile Asn Gln Lys Met Asn Phe Thr Leu Asp Ser Ile
            50                  55                  60
Asn Arg Glu Arg Glu Leu Glu Ser Gln Asn Lys Lys Glu Asn Gln Lys
65                  70                  75                  80
Asn Ile Lys Asp Ile Lys Met Trp Val Leu Gly Leu Val Gly Thr Ile
            85                  90                  95
Ala Gly Ser Leu Ile Val Ala Val Leu Arg Met Phe Phe Gly Val
            100                 105                 110
```

<210> 5420
<211> 114
<212> PRT
<213> S.epidermidis

<400> 5420
```
Gln Met Asn Phe Lys Gln Met His Gln Phe Asn Tyr Arg Leu Pro Glu
1               5                   10                  15
Leu Leu Thr Asn Tyr Leu His Leu Ile His Ser Thr Ser Glu Pro Arg
            20                  25                  30
Met Cys His Ala Met Lys Lys Gly Glu Ile His Asp Tyr Cys Ile Ser
            35                  40                  45
His Tyr Tyr Ile Phe Tyr Tyr Ser Asn Phe Asn Asn Leu Ala Thr Lys
            50                  55                  60
Arg Ile Arg Tyr Arg Asp Phe Cys Ser His Arg Arg Ala Phe Ser Tyr
65                  70                  75                  80
Arg Tyr Trp Ser Ser Glu Cys Leu Arg Tyr Ile Arg Ser Asp Lys Tyr
            85                  90                  95
Ser Leu Lys Cys His Thr Tyr Leu Cys Arg Ser Tyr Pro Tyr Phe Ile
            100                 105                 110
Asn Pro
```

<210> 5421
<211> 85
<212> PRT
<213> S.epidermidis

<400> 5421
Phe Val Asn Val Lys Lys Glu Gly Leu Ile Met Arg Phe Lys Leu Lys
1   5   10   15
Glu Asp Glu Ile Leu Glu Phe Leu Asp Leu Asn Phe Pro Gln Gln Thr
            20   25   30
Phe Glu Lys Gly Arg Leu Leu Ile Gly Gln Asn Lys Arg Gln Pro Leu
        35   40   45
His Val Tyr Tyr Phe Gly Lys Lys Phe Leu Ala Leu Leu Asn Val Asn
        50   55   60
Phe Asn Thr Phe Glu Tyr Ile Lys Val Asp Glu Val Asp Tyr Asn Asp
65   70   75   80
Ile Lys Lys Ser Leu
                85

<210> 5422
<211> 462
<212> PRT
<213> S.epidermidis

<400> 5422
Ile Gly Gly Val Ser Met Ala Lys Lys Lys Val Ile Phe Glu Cys Met
1   5   10   15
Ala Cys Gly Tyr Gln Ser Pro Lys Trp Met Gly Lys Cys Pro Asn Cys
            20   25   30
Gly Ala Trp Asn Gln Met Glu Glu Ile Val Glu Lys Val Ala His Pro
        35   40   45
Lys His Gly Val Lys Thr Lys Glu Thr Ala Gly Lys Val Gln Lys Leu
        50   55   60
Asn Ser Val Lys His Glu Ala Thr Pro Arg Leu Leu Thr Glu Ser Lys
65   70   75   80
Glu Phe Asn Arg Val Leu Gly Gly Gly Ile Val Ser Gly Ser Leu Val
            85   90   95
Leu Ile Gly Gly Asp Pro Gly Ile Gly Lys Ser Thr Leu Leu Leu Gln
            100   105   110
Ile Cys Ala Ala Leu Ser Gln Asn Lys Asn Val Leu Tyr Ile Thr Gly
        115   120   125
Glu Glu Ser Ile Asn Gln Thr Lys Leu Arg Ala Asp Arg Leu Glu Glu
        130   135   140
Asp Ser Ser His Leu Asn Val Leu Ala Glu Thr Asp Leu Glu Val Ile
145   150   155   160
His Gln Thr Val Lys Glu Glu Arg Pro Asp Leu Leu Val Val Asp Ser
            165   170   175
Ile Gln Thr Ile Tyr His Pro Glu Ile Ser Ser Ala Pro Gly Ser Val
            180   185   190
Ser Gln Val Arg Glu Ser Thr Gln Ser Leu Met Asn Ile Ala Lys Gln
        195   200   205
Met Asn Ile Ala Thr Phe Ile Val Gly His Val Thr Lys Glu Gly Gln
        210   215   220
Ile Ala Gly Pro Arg Leu Leu Glu His Met Val Asp Thr Val Leu Tyr
225   230   235   240
Phe Glu Gly Asp Glu His His Ala Tyr Arg Ile Leu Arg Ala Val Lys
            245   250   255
Asn Arg Phe Gly Ser Thr Asn Glu Met Gly Ile Phe Glu Met Lys Gln
        260   265   270
Ser Gly Leu Lys Gly Val Leu Asn Pro Ser Glu Met Phe Leu Glu Glu
        275   280   285

```
Arg Ser Thr Asn Val Pro Gly Ser Thr Ile Val Pro Thr Met Glu Gly
    290                 295                 300
Thr Arg Pro Leu Leu Ile Glu Val Gln Ala Leu Val Thr Pro Thr Thr
305                 310                 315                 320
Phe Asn Asn Pro Arg Arg Met Ala Thr Gly Ile Asp His Asn Arg Leu
                325                 330                 335
Ser Leu Leu Met Ala Val Leu Glu Lys Lys Glu Asn Tyr Leu Leu Gln
                340                 345                 350
Gln Gln Asp Ala Tyr Ile Lys Val Ala Gly Gly Val Lys Leu Thr Glu
                355                 360                 365
Pro Ala Val Asp Leu Ser Ile Ile Val Ala Thr Ala Ser Ser Phe Lys
    370                 375                 380
Asp Gln Ala Val Asp Gly Leu Asp Cys Phe Val Gly Glu Val Gly Leu
385                 390                 395                 400
Thr Gly Glu Val Arg Arg Val Ser Arg Ile Glu Gln Arg Val Gln Glu
                405                 410                 415
Ala Ala Lys Leu Gly Phe Lys Arg Ala Ile Ile Pro Gln Thr Asn Ile
                420                 425                 430
Gly Gly Trp Thr Phe Pro Glu Gly Ile Gln Val Val Gly Val Ser Ser
                435                 440                 445
Val His Glu Ala Leu Lys Tyr Ala Leu His Ser Lys Gln Arg
    450                 455                 460
```

<210> 5423
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5423
```
Leu Phe Phe Val Phe Gln Tyr Lys Tyr Tyr Met Ile Phe Asn Phe Ala
1               5                   10                  15
Thr Glu Pro Tyr Leu Leu Leu Arg Lys Lys Tyr Leu Arg Gln Gln Met
            20                  25                  30
Met Ser Gln Val Leu Asn Leu Ser Leu Lys Leu Phe Phe Asn Trp Glu
        35                  40                  45
```

<210> 5424
<211> 69
<212> PRT
<213> S.epidermidis

<400> 5424
```
Lys Phe Tyr Val Val Gly Lys Cys Asn Thr Leu Glu Lys Leu Leu Val
1               5                   10                  15
Lys Ile Ala Cys Ile Lys Glu Ile Tyr Lys Lys Thr Gly Ser Val Ala
            20                  25                  30
Lys Leu Lys Leu Tyr Ala His Leu Tyr Lys Thr Ile Lys Ala Asn Ile
        35                  40                  45
Val Leu Thr Val Lys Ser Phe Ile Ser Ile Asn Tyr Phe Ser Phe Phe
    50                  55                  60
Ser Ile Asn Ile Thr
65
```

<210> 5425
<211> 484
<212> PRT

<213> S.epidermidis

<400> 5425

```
His Thr Tyr Val Asn Glu Val Ile Ser Ile Asn Trp Pro Trp Asp Lys
1               5                   10              15
Pro Tyr His Glu Gln Val Val Glu Gln Ile Lys Pro Lys Tyr Glu Thr
            20              25              30
Gln Glu Glu Met Ile Leu Arg Leu Val Arg Glu His Lys Glu Asn Ile
        35              40              45
Asp Asn Ile Thr Met Gly Glu Arg Tyr Tyr Asn His His Pro Asp Ile
    50              55              60
Leu Asp Ala Pro Phe Lys Arg Asp Val Asn Gly Asp Tyr Asp Glu Thr
65              70              75                  80
Lys Pro Asp Trp Arg Met Tyr Thr Asn Tyr His Gln Asn Leu Val Asp
            85              90                  95
Gln Lys Val Ala Tyr Ala Val Ala Asn Pro Val Thr Phe Gly Val Asp
            100             105             110
Asn Asp Lys Ala Leu Lys Gln Ile Gln His Thr Leu Asn His Lys Trp
        115             120             125
Asp Asp Lys Leu Val Asp Ile Leu Thr Ala Ala Ser Asn Lys Gly Ile
    130             135             140
Glu Trp Val Gln Pro Tyr Val Asp Glu Glu Gly Glu Phe Lys Thr Phe
145             150             155             160
Arg Val Pro Ala Glu Gln Ala Val Pro Ile Trp Thr Asn Lys Glu Arg
            165             170             175
Asp Glu Leu Gln Ala Phe Ile Arg Val Tyr Glu Leu Asp Gly Ala Glu
            180             185             190
Arg Val Glu Tyr Trp Thr Lys Asp Asp Val Thr Phe Tyr Glu Leu Lys
            195             200             205
Glu Gly Gln Leu Ile Pro Asp Phe Tyr Arg Ser Glu Asp His Ile Gln
            210             215             220
Pro His Tyr Tyr Gln Gly Asn Lys Leu Met Ser Trp Gly Arg Val Pro
225             230             235             240
Phe Ile Pro Phe Lys Asn Asn Pro Gln Glu Val Ser Asp Leu Phe Met
            245             250             255
Tyr Lys Thr Ile Ile Asp Ala Leu Asp Lys Arg Leu Ser Asp Thr Gln
            260             265             270
Asn Thr Phe Asp Glu Ser Val Glu Leu Ile Tyr Ile Leu Lys Gly Tyr
            275             280             285
Glu Gly Glu Asp Met Lys Asp Phe Met His Asn Leu Lys Tyr Tyr Lys
            290             295             300
Ala Ile Ser Val Ala Gly Glu Ser Gly Ser Gly Val Asp Thr Ile Lys
305             310             315             320
Val Glu Val Pro Ile Asp Ser Val Lys Glu Tyr Thr Lys Met Leu Arg
            325             330             335
Asp Tyr Ile Ile Glu Phe Gly Gln Gly Val Asp Phe Gln Gln Asp Lys
            340             345             350
Phe Gly Asn Ser Pro Ser Gly Ile Ala Leu Lys Phe Met Tyr Ser Asn
            355             360             365
Leu Asp Leu Lys Ala Asn Lys Leu Lys Asn Lys Thr Leu Thr Ala Leu
    370             375             380
Gln Glu Leu Leu Gln Tyr Ile Ile Asp Phe Tyr Arg Leu Asp Val Lys
385 ,           390             395             400
Val Gln Asp Ile Glu Ile Thr Phe Asn Phe Asn Val Met Val Asn Glu
            405             410             415
Leu Glu Asn Ser Gln Ile Ala Met Asn Ser Thr Gly Leu Leu Ser Lys
```

```
                420                     425                     430
Glu Thr Ile Leu Ser Asn His Ala Trp Val Glu Asp Pro Val Ala Glu
        435                     440                     445
Met Glu Arg Ile Glu Gln Glu Asn Ile Glu Leu Asn Gln Gln Leu Pro
    450                     455                     460
Asp Ile Glu Glu Gly Leu Asn Gly Glu Gln Gln Arg Gln Ser Lys Asn
465                     470                     475                     480
Asn Gln Pro Glu
```

<210> 5426
<211> 135
<212> PRT
<213> S.epidermidis

<400> 5426
```
Asp Leu Asn Val Ala Lys His Met Asn Val Lys Leu Leu Asn Pro Leu
1               5                   10                  15
Thr Leu Ala Tyr Met Gly Asp Ala Val Leu Asp Gln His Val Arg Glu
            20                  25                  30
Tyr Ile Val Leu Lys Leu Gln Ser Lys Pro His Arg Leu His Gln Val
            35                  40                  45
Ser Lys Ser Tyr Val Ser Ala Lys Ser Gln Ala Lys Thr Leu Glu Tyr
    50                  55                  60
Leu Leu Asp Ile Asp Trp Phe Thr Glu Glu Glu Leu Ser Val Leu Lys
65                  70                  75                  80
Arg Gly Arg Asn Ala Lys Ser Tyr Thr Lys Ala Lys Asn Thr Asp Ile
            85                  90                  95
Gln Thr Tyr Arg Lys Ser Ser Ala Leu Glu Ala Val Ile Gly Phe Leu
            100                 105                 110
Tyr Leu Asp His Gln Ser Glu Arg Leu Glu Asn Leu Leu Glu Thr Ile
            115                 120                 125
Val Arg Ile Val Asp Glu Arg
    130                 135
```

<210> 5427
<211> 479
<212> PRT
<213> S.epidermidis

<400> 5427
```
Lys Asp Ser Leu Lys Lys Leu Arg Met Glu Arg Phe Lys Met Ile Thr
1               5                   10                  15
Leu Tyr Asn Thr Leu Thr Arg Arg Lys Glu Thr Phe Glu Pro Ile Glu
            20                  25                  30
Pro Gly Lys Val Lys Met Tyr Val Cys Gly Pro Thr Val Tyr Asn Tyr
            35                  40                  45
Ile His Ile Gly Asn Ala Arg Pro Ala Ile Asn Tyr Asp Val Val Arg
    50                  55                  60
Arg Tyr Phe Glu Tyr Lys Gly Tyr Glu Val Ile Tyr Val Ser Asn Phe
65                  70                  75                  80
Thr Asp Val Asp Asp Lys Leu Ile Asn Arg Ser Lys Glu Leu Asn Glu
            85                  90                  95
Ser Val Pro Glu Ile Ala Glu Lys Tyr Ile Lys Ala Phe Tyr Glu Asp
            100                 105                 110
Val Gly Ala Leu Asn Val Lys Lys Ala Thr Ser Asn Pro Arg Val Met
```

```
              115                   120                   125
His His Met Gly Glu Ile Ile Asp Phe Ile Lys Glu Leu Val Asp Glu
    130                   135                   140
Gly Tyr Ala Tyr Glu Ser Asp Gly Asp Val Tyr Phe Arg Thr Arg Gln
145                   150                   155                   160
Phe Asp Gly Tyr Gly Lys Leu Ser His Gln Ser Leu Asp Asp Leu Lys
                  165                   170                   175
Val Gly Ala Arg Ile Glu Ala Gly Glu Gln Lys Glu Asp Ala Leu Asp
                  180                   185                   190
Phe Thr Leu Trp Lys Lys Ala Lys Pro Gly Glu Ile Ser Trp Asn Ser
                  195                   200                   205
Pro Phe Gly Lys Gly Arg Pro Gly Trp His Ile Glu Cys Ser Val Met
    210                   215                   220
Ala Tyr His Glu Leu Gly Ser Thr Ile Asp Ile His Ala Gly Gly Ser
225                   230                   235                   240
Asp Leu Gln Phe Pro His His Glu Asn Glu Ile Ala Gln Ser Glu Ala
                  245                   250                   255
His Asn His Ala Pro Phe Ala Asn Tyr Trp Met His Asn Gly Phe Ile
                  260                   265                   270
Asn Ile Asp Asn Glu Lys Met Ser Lys Ser Leu Gly Asn Phe Ile Leu
                  275                   280                   285
Val His Asp Ile Ile Lys Glu Val Asp Pro Asp Val Leu Arg Phe Phe
    290                   295                   300
Met Ile Ser Val His Tyr Arg Ser Pro Ile Asn Tyr Asn Leu Glu Leu
305                   310                   315                   320
Val Gly Ala Ala Arg Ser Gly Leu Glu Arg Ile Arg Asn Ser Tyr Lys
                  325                   330                   335
Leu Ile Glu Glu Arg Glu Gln Ile Ala Ser Asp Leu Glu Glu Gln Ser
                  340                   345                   350
Glu Tyr Ile Gln Gln Ile Asp Lys Ile Leu Asn Gln Phe Glu Thr Val
                  355                   360                   365
Met Asp Asp Asp Phe Asn Thr Ala Asn Ala Val Thr Ala Trp Tyr Asp
    370                   375                   380
Leu Ala Lys Leu Ala Asn Lys Tyr Val Leu Glu Asn Thr Thr Ser Thr
385                   390                   395                   400
Lys Val Leu Asn Arg Phe Lys Glu Val Tyr Ser Ile Phe Ser Asp Val
                  405                   410                   415
Leu Gly Val Pro Leu Lys Ser Lys Glu Thr Glu Glu Leu Leu Asp Glu
                  420                   425                   430
Asp Ile Glu Gln Leu Ile Glu Glu Arg Asn Glu Ala Arg Lys Asn Lys
                  435                   440                   445
Asp Phe Ala Arg Ala Asp Glu Ile Arg Asp Met Leu Lys Ala Arg His
    450                   455                   460
Ile Ile Leu Glu Asp Thr Pro Gln Gly Val Arg Phe Lys Arg Gly
465                   470                   475
```

```
<210> 5428
<211> 183
<212> PRT
<213> S.epidermidis
```

```
<400> 5428
Thr Ser Ser Val Arg Gly Lys Val Met Lys Lys Arg Tyr Leu Ile Ile
1                   5                   10                  15
Asp Gly Tyr Asn Met Ile Gly Gln Ser Ser Thr Leu Ser Thr Val Ala
                  20                   25                   30
```

```
Lys Glu Asn Leu Glu Glu Ala Arg Glu Gln Leu Leu Asp Thr Ile Ala
        35                  40                  45
Asn Tyr Asn Ala Leu Ile Ala Asp Glu Ile Val Cys Val Phe Asp Ala
    50                  55                  60
Tyr Glu Gln Ser Gly Ile Glu Arg Glu Tyr Phe Tyr His Gly Val Lys
65                  70                  75                  80
Thr Ile Phe Thr Lys Glu Lys Glu Thr Ala Asp Ser Phe Ile Glu Arg
                85                  90                  95
Tyr Val Tyr Glu Leu Tyr Asn Lys His Thr Thr His Ile Thr Val Val
                100                 105                 110
Thr Ser Asp Met Ser Glu Gln His Ala Ile Phe Gly Ser Gly Ala Tyr
            115                 120                 125
Arg Ile Ser Ser Arg Glu Met Trp Arg Glu Leu Lys Glu Asn Glu Val
    130                 135                 140
Val Val Asn Lys Ser Leu Asp Asp Phe Ser Glu Lys Lys Pro Arg Ile
145                 150                 155                 160
Arg Ile Pro Leu Ser Asn Glu Ile Leu Glu Glu Phe Glu Lys Ile Arg
                165                 170                 175
Arg Gly Asn Gln Lys Lys Asp
                180
```

<210> 5429
<211> 362
<212> PRT
<213> S.epidermidis

<400> 5429
```
Glu Ala Thr Val Met Ser Glu Lys Val Lys Phe Glu Lys Arg Glu Ser
1               5                   10                  15
Leu Lys Glu Lys Pro Asp Thr Ala Asn Leu Gly Phe Gly Gln Tyr Phe
                20                  25                  30
Thr Asp Tyr Met Leu Ser Val Asp Tyr Asp Ala Asp Gln Gly Trp His
        35                  40                  45
Asp Met Lys Ile Val Pro Tyr Ala Pro Phe Glu Ile Ser Pro Ala Ala
        50                  55                  60
Gln Gly Leu His Tyr Gly Gln Ala Val Phe Glu Gly Leu Lys Ala Tyr
65                  70                  75                  80
Lys His Asn Gly Glu Val Val Leu Phe Arg Pro Asp Gln Asn Phe Lys
                85                  90                  95
Arg Ile Asn Asn Ser Leu Ala Arg Leu Glu Met Pro Glu Val Asp Glu
                100                 105                 110
Glu Ala Leu Leu Glu Gly Leu Lys Gln Leu Ile Asp Val Glu Arg Asp
            115                 120                 125
Trp Val Pro Glu Gly Glu Gly Gln Ser Leu Tyr Ile Arg Pro Phe Val
    130                 135                 140
Phe Ala Thr Glu Gly Val Leu Gly Val Arg Ser Ser His Gln Tyr Lys
145                 150                 155                 160
Leu Leu Ile Ile Leu Ser Pro Ser Gly Ala Tyr Tyr Gly Gly Asp Thr
                165                 170                 175
Leu Lys Ser Thr Lys Ile Tyr Val Glu Asp Glu Tyr Val Arg Ala Val
                180                 185                 190
Arg Gly Gly Val Gly Phe Ala Lys Val Ala Gly Asn Tyr Ala Ala Ser
            195                 200                 205
Leu Leu Ala Gln Thr Asn Ala Asn Lys Leu Gly Tyr Asp Gln Val Leu
    210                 215                 220
Trp Leu Asp Gly Val Glu Gln Lys Tyr Val Glu Glu Val Gly Ser Met
```

```
225                     230                     235                     240
Asn Ile Phe Phe Val Glu Asn Gly Lys Val Val Thr Pro Ala Leu Asn
                    245                     250                     255
Gly Ser Ile Leu Pro Gly Ile Thr Arg Lys Ser Ile Ile Gln Leu Ala
                260                     265                     270
Glu Asp Leu Gly Tyr Glu Val Glu Glu Arg Arg Val Ser Ile Glu Glu
            275                     280                     285
Leu Phe Asn Ala Tyr Asp Lys Gly Glu Leu Thr Glu Val Phe Gly Ser
        290                     295                     300
Gly Thr Ala Ala Val Ile Ser Pro Val Gly Thr Leu Arg Tyr Glu Asp
305                     310                     315                     320
Arg Glu Ile Val Ile Asn Asn Asn Glu Pro Gly Lys Ile Thr Gln Lys
                    325                     330                     335
Leu Tyr Asp Thr Tyr Thr Gly Ile Gln Ser Gly Lys Leu Glu Asp Lys
                340                     345                     350
Tyr Gly Trp Arg Val Glu Val Pro Lys Tyr
                355                     360
```

```
<210> 5430
<211> 125
<212> PRT
<213> S.epidermidis

<400> 5430
Phe Lys Gly Val Asn Val Leu Glu Pro Ile Lys Glu Gln Glu Val Leu
1                   5                       10                      15
Asp Leu Leu Thr Ser Tyr Ser Asn Gln Pro Val Tyr Leu His Val Glu
                20                      25                      30
Thr Thr Asn Gly Ala Tyr Ala Asn His Phe Asp Gln Arg Val Phe Asn
            35                      40                      45
Ala Gly Thr Phe Leu Arg Asn Ile Val Val Thr Phe Glu His Ala Gln
        50                      55                      60
Leu Lys Gly Gly Asp Lys Asp Pro Tyr Arg Val Gly Leu Lys Leu Lys
65                      70                      75                      80
Asp Gly Gly Trp Val Tyr Val Gln Gly Leu Thr His Tyr Glu Val Asn
                85                      90                      95
Glu Asn Asn Glu Phe Leu Ile Ala Gly Phe Asn Tyr Glu Gly Gln Leu
            100                     105                     110
Ala Ala Thr Ile Glu Ile Ser Lys Gln Pro Phe Thr Ile
        115                     120                     125
```

```
<210> 5431
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5431
Glu Thr Leu Val Ile Ser Leu Val Ile Gly Phe Val Cys Ser Phe Val
1                   5                       10                      15
Phe Leu Gly Val Leu Ser Leu Glu Gly Leu Asp Gly Val Leu Leu Gly
                20                      25                      30
Phe Asp Gly Phe Leu Val Ser Ala Trp
            35                      40
```

```
<210> 5432
<211> 314
```

<212> PRT
<213> S.epidermidis

<400> 5432
```
Leu Leu Met Val Lys Gln Val Arg Leu Gly Lys Ser Asp Val Asn Val
1               5                   10                  15
Phe Pro Ile Ala Leu Gly Thr Asn Ala Val Gly Gly His Asn Leu Tyr
            20                  25                  30
Pro Asn Leu Asp Glu Glu Gln Gly Lys Glu Val Val Arg Gln Ala Ile
            35                  40                  45
Asp Asn Gly Ile Thr Leu Leu Asp Thr Ala Tyr Ile Tyr Gly Pro Glu
        50                  55                  60
Arg Ser Glu Glu Leu Val Gly Gln Val Val Lys Glu Tyr Pro Arg Glu
65                  70                  75                  80
Lys Val Gln Ile Ala Thr Lys Gly Ser His Val Ile Lys Glu Asn Glu
                85                  90                  95
Glu Val Val Gln Asn Asn Asp Pro Glu Tyr Leu Lys Gln Gln Val Glu
            100                 105                 110
Asn Ser Leu Glu Arg Leu Gln Val Asp Tyr Ile Asp Leu Tyr Tyr Ile
        115                 120                 125
His Phe Pro Asp Asp Asp Thr Pro Lys Asp Lys Ala Val Ala Ala Leu
        130                 135                 140
Lys Glu Leu Lys Asp Glu Gly Lys Ile Lys Ala Ile Gly Val Ser Asn
145                 150                 155                 160
Phe Ser Leu Glu Gln Leu Lys Glu Ala Asn Lys Asp Gly Tyr Val Asp
                165                 170                 175
Val Val Gln Leu Glu Tyr Asn Leu Leu His Arg Glu Asn Glu Glu Val
            180                 185                 190
Met Ala Tyr Ala Ala Glu Asn Asn Ile Thr Phe Val Pro Tyr Phe Pro
        195                 200                 205
Leu Ala Ser Gly Ile Leu Ala Gly Lys Tyr Asp Glu Asn Gln Thr Phe
        210                 215                 220
Glu Asp His Arg Ala Glu Arg Pro Asp Phe Gln Pro Asp Val Phe Lys
225                 230                 235                 240
Asp Asn Val Arg Arg Val Lys Ala Leu Thr Asp Ile Ala Glu Ala His
                245                 250                 255
Asp Thr Thr Ile Ala Asn Val Val Leu Ala Phe Tyr Leu Thr Arg Pro
        260                 265                 270
Ser Leu Asp Val Val Ile Pro Gly Ala Lys Arg Ala Glu Gln Val Val
        275                 280                 285
Glu Asn Ile Asp Ala Ala Asn Ile Glu Leu Ser Gln Gly Glu Ile Asp
        290                 295                 300
Lys Ile Asp Ser Leu Phe Pro Ile Lys Lys
305                 310
```

<210> 5433
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5433
```
Asn Thr Ala Val Ile Tyr Ile Phe Ile Ile Arg Asn Ser Leu Val Thr
1               5                   10                  15
Ile Phe Leu Met Asn Ile Val Ile Ile Ser Thr Ile Tyr Val Ile Arg
            20                  25                  30
Ile Leu Arg Asn Val Glu Arg Ile Asn
```

35   40

<210> 5434
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5434
Arg Glu Ala Val Asn Gly Phe Glu Asn Val Leu Asp Ile Val Gly Thr
1   5   10   15
Asn Pro Ile Cys Asp Val Thr Cys Ala Ile Ala Asp Lys Leu Ile Ile
            20   25   30
Gly Ser Asn Gln Lys Ala Gly Ile Val Val Leu Ser Leu Ala Leu Lys
            35   40   45
Ala

<210> 5435
<211> 163
<212> PRT
<213> S.epidermidis

<400> 5435
Ser Lys Lys Val Lys Lys Glu Val Ile Ser Met His Asn Met Ser Asp
1   5   10   15
Ile Ile Glu Gln Tyr Ile Lys Arg Leu Phe Glu Glu Ala Asp Glu Asp
            20   25   30
Val Val Glu Ile Gln Arg Ala His Ile Ala Gln Arg Phe Asp Cys Val
            35   40   45
Pro Ser Gln Leu Asn Tyr Val Ile Lys Thr Arg Phe Thr Asn Glu His
        50   55   60
Gly Tyr Glu Ile Glu Ser Lys Arg Gly Gly Gly Tyr Ile Arg Ile
65   70   75   80
Thr Lys Ile Glu Asn Lys Asp Ala Thr Gly Tyr Ile Asn His Leu Leu
                85   90   95
Gln Leu Ile Gly Pro Ser Ile Ser Gln Gln Gln Gly Tyr Tyr Val Ile
            100   105   110
Asp Gly Leu Leu Asp Lys Gly Leu Ile Asn Glu Arg Glu Ala Lys Met
            115   120   125
Ile Gln Thr Ile Ile Asp Arg Glu Thr Leu Lys Met Asp Val Val Ala
        130   135   140
Arg Asp Ile Ile Arg Ala Asn Ile Leu Lys Arg Leu Leu Pro Val Ile
145   150   155   160
Asn Tyr Tyr

<210> 5436
<211> 146
<212> PRT
<213> S.epidermidis

<400> 5436
Asp Met Trp Val Ser Val Glu Arg Tyr Leu Phe Asn Lys Ile Tyr Asn
1   5   10   15
Lys Leu Lys Ser Asn Pro Ile Ile Asn Lys Gln Leu Asp Gly Arg Val
            20   25   30

```
Phe Asp Cys Val Gln Lys Asp Ala Val Tyr Pro Tyr Ile Val Val Gly
        35                  40                  45
Glu Thr Asn Val Thr Asn Lys Glu Thr Thr Thr Ser Met Phe Glu Asp
    50                  55                  60
Val Gly Val Thr Leu His Val Tyr Ser Gln Ala Arg Asn Arg Asp Glu
65                  70                  75                  80
Ala Ser Gln Ile Ile Gln Tyr Leu Gly Phe Val Leu Asn Ser Glu Ile
                85                  90                  95
Glu Ile Asn Asn Tyr Ser Phe Ile Lys Ser Arg Ile Asp Thr Gln Glu
                100                 105                 110
Val Ile Thr Asp Ile Asp Gln Tyr Thr Lys His Gly Ile Ile Arg Leu
            115                 120                 125
Val Phe Lys Tyr Arg His Asn Thr Leu Gln Arg Ser Val Thr Asn Gly
    130                 135                 140
Ala Glu
145


<210> 5437
<211> 56
<212> PRT
<213> S.epidermidis

<400> 5437
Trp Tyr Leu Leu Asn Tyr Thr Lys Ala Pro Tyr Phe Ser Lys Tyr Phe
1               5                   10                  15
Asn Ile Lys Leu His Ile Asn Thr Lys Tyr Phe Gly Glu Thr Leu Glu
            20                  25                  30
Gly Thr Gly Gln Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys
            35                  40                  45
Ala Ser Gln Gln Tyr Glu Leu Phe
    50                  55


<210> 5438
<211> 54
<212> PRT
<213> S.epidermidis

<400> 5438
Leu Ser Leu Phe Tyr Lys His Cys Asn Ile Ile Lys Thr Tyr Asn Ile
1               5                   10                  15
Asn Lys Thr Asn Lys His Leu Lys Ile Ile Tyr Thr Lys Ile His Thr
            20                  25                  30
Thr Asn Tyr Ile Tyr Leu Phe Ile Ile Lys Lys Phe Lys Ile Thr Ser
            35                  40                  45
His Leu Gln Thr Ser Leu
    50


<210> 5439
<211> 158
<212> PRT
<213> S.epidermidis

<400> 5439
Arg Leu Ile Leu Lys Arg Gly Lys His Val Met Leu Lys Arg Arg Ser
1               5                   10                  15
Ser Lys Phe Leu Gly Leu Leu Ala Thr Leu Ala Leu Ala Ile Val Leu
```

```
                    20                      25                      30
Ser Ala Cys Gly Asn Ser Gly Asn Gly Ser Gly Ser Ser Asp Asp Ser
        35                      40                      45
Gln Thr Ser Leu Gly Asn Lys Glu Ile Glu Ile Ser Tyr Ile Ala Ser
    50                      55                      60
Asp Asn Ser Thr Pro Arg Ser Leu Val Ile Ala Glu Val Leu Lys Lys
65                      70                      75                      80
Ala Gly Tyr Asp Val Thr Thr Thr Pro Val Thr Ala Ser Gly Pro Leu
                85                      90                      95
Tyr Ala Ala Val Ser Glu Asn Ser Asp Ser Phe His Ala Ser Gly Ile
            100                     105                     110
Phe Pro Thr Thr Asp Lys Ser Tyr Tyr Asp Lys Phe Lys Ser Lys Leu
            115                     120                     125
Thr Ile Tyr Asp Asp Lys His Leu Ile Asp Asn Ala Lys Val Gly Leu
        130                     135                     140
Ala Val Pro Lys Tyr Val Gln Asp Val Asp Ser Ile Ser Asp
145                     150                     155
```

<210> 5440
<211> 618
<212> PRT
<213> S.epidermidis

<400> 5440
```
Leu Pro Ile Leu Leu Lys Thr Leu Gln Gly Ile Gly Gln Ser Leu Pro
1                   5                       10                      15
Val Glu Thr Lys Leu Asn Glu Lys Leu Asn Glu Asp Gly Ser Leu Glu
                20                      25                      30
Ile Glu Met Val Glu Asn Lys Ala Thr Phe Asp Ala Ile Gly Ala Ile
        35                      40                      45
Thr Lys Met Trp Thr Ile Thr Gly Val Gly Gly Ala Asp Asp Leu Asn
        50                      55                      60
Glu Tyr Arg Ile Val Met Leu Asp Lys Thr Thr Val Gly Gln Lys Glu
65                      70                      75                      80
Lys Leu Thr Ile Lys Ala Arg Pro Val Glu Leu Asp Asp Leu Asn Asn
                85                      90                      95
Leu Arg Val Tyr Glu Val Tyr Asn Gly Ser Phe Thr Gly Lys Arg Tyr
            100                     105                     110
Phe Asp Leu Val Phe Lys Asp Thr Gly Tyr Lys Tyr Glu Leu His Ala
            115                     120                     125
Lys Val Ser Ser Ser Lys Phe Glu Asn Leu Gly Asn His Asp Thr Asn
        130                     135                     140
Leu Glu Leu Phe Lys Lys Gly Leu Glu Arg Tyr Asp Leu Glu Tyr Glu
145                     150                     155                     160
Tyr Glu Pro Lys Thr Lys Thr Phe His Leu Phe Asp Val Val Gln Arg
                165                     170                     175
Lys Ala Asp Tyr Tyr Ile Lys Ala Gly Val Asn Ala Asn Asn Val Lys
            180                     185                     190
Val Gln Glu Asp Ala Ser Lys Cys Tyr Thr Tyr Ile Arg Gly Tyr Gly
            195                     200                     205
Gly Phe Asp Asp Gln Gln Thr Phe Asn Glu Ala Ser Leu Gln Tyr Glu
        210                     215                     220
Tyr Thr His Pro Leu Ala Asp Leu Ile Gly Lys Arg His Ala Pro Pro
225                     230                     235                     240
Val Val Asp Gly Arg Met Thr Lys Gly Asp Thr Leu Lys Lys Ala Met
                245                     250                     255
```

```
Glu Leu Val Ile Gln Glu Ser Leu Lys Thr Ser Val Thr Leu Asp Phe
        260             265             270
Ile Ser Leu Gln Lys His Phe Lys Glu Ala Val Pro Arg Val Gly Asp
        275             280             285
Ile Val Asn Val Val Asp Asp Leu Ile Gly Leu Asn Glu Phe Val Arg
        290             295             300
Ile Ile Glu Ile Thr Thr His Arg Asp Ile Tyr Asn Lys Ile Ile Lys
305             310             315             320
Gln Asp Val Val Leu Gly Glu Phe Arg Leu Gln Asp Arg Tyr Met Lys
            325             330             335
Ala Val Asn Thr Ala Ala Asn Tyr Val Lys Ala Ile Lys Ser Asn Lys
            340             345             350
Ser Asp Pro Ala Lys Asp Leu Arg Ser Met Gln Ala Gln Thr Gln Ala
            355             360             365
Asn Thr Lys Thr Thr Gln Asp Leu Gln Lys Lys Thr Asp Asp Ile Lys
        370             375             380
Lys Arg Leu Glu Ser Ala His Ala Lys Ser Val Thr Thr Ala Asn Gly
385             390             395             400
Thr Ile Val His Asp Phe Thr Pro Lys Ser Lys Ile Arg Lys Val Lys
            405             410             415
Thr Ile Gly Thr Ile Gly Asp Ser Val Ala Lys Gly Thr Gly Ala Lys
            420             425             430
Thr Asn Phe Thr Gln Met Leu Ala Lys Lys Ile Lys Ala Lys Ser Thr
            435             440             445
Asn Leu Ala Val Ser Gly Ala Thr Ile Ser Thr Asn Lys Asp Asn Ser
        450             455             460
Ile Tyr Glu Gln Ala Thr Lys Ile Lys Gly Asp Leu Ile Ile Val Gln
465             470             475             480
Gly Thr Asp Asp Asp Trp Thr Asn Asp Ile Lys Ile Gly Thr Asp Lys
            485             490             495
Thr Asp Ile Lys Thr Phe Tyr Gly Ala Phe Tyr Ser Ala Ile Ser Lys
            500             505             510
Ile Lys Ser Asn Asn Pro Lys Ser Lys Ile Ile Val Met Thr Pro Thr
        515             520             525
Lys Gln Cys Tyr Ile Lys Asp Gly Lys Val Val Arg Lys Asp Thr Thr
        530             535             540
Lys Asn Asp Leu Gly Tyr Thr Leu Ala Asp Tyr Val Asp Val Gln Ile
545             550             555             560
Asp Ala Cys Asn Glu Leu Asp Ile Pro Val Tyr Asp Ala Tyr His Ser
            565             570             575
Thr Gln Phe Lys Pro Asn Ile Pro Ser Tyr Arg Lys Ser Ser Met Pro
        580             585             590
Asp Gly Val His Pro Asn Glu Lys Gly His Glu Val Ile Met Tyr Glu
            595             600             605
Leu Val Lys Asn Phe Tyr Gly Phe Tyr Gly
        610             615
```

<210> 5441
<211> 574
<212> PRT
<213> S.epidermidis

<400> 5441

```
Asn Gly Ile Phe Lys Glu Lys Glu Thr Thr Met Thr Lys Gln Asn Ile
1               5               10              15
Phe Ile Asp Asp Ile Tyr Trp Glu Arg Val Gln Leu Phe Val Lys Gly
```

```
                20                      25                      30
His Phe Glu Gly Val Lys Pro Thr Arg Asn Phe Leu Leu Arg Asn Leu
        35                      40                      45
Thr Glu Thr Lys Leu Leu Asn Ala Asn His Val Asn Ile Gln Gly Ser
        50                      55                      60
Thr Phe Glu Ala Arg Phe Asn Ile Ala Ile Leu Glu Lys Gly Asn Phe
65                      70                      75                      80
Leu Gly Thr Gly Asn Tyr Ile Leu Ile Asn Arg Gln Glu Asp Glu Tyr
                85                      90                      95
Val Cys Gln Ile Asn Pro Lys Phe Leu Asn Asp Lys Lys Asn Gln Met
            100                     105                     110
Thr Leu Glu Glu Leu Arg Asp Tyr Asn Ser Leu Glu Thr Gln Ser Leu
        115                     120                     125
Gln Lys Ser Tyr Leu Leu Lys Lys Tyr Gly Lys Ser Phe Gln Arg Tyr
        130                     135                     140
Asn Asn Lys Glu Ile Lys Ser Tyr Val Ile Val Pro Ala Ile Ser Gln
145                     150                     155                     160
Glu Ile Asn Glu Phe Ile Phe Lys Val Gln Tyr Lys Ser Glu Ile Lys
                165                     170                     175
Lys Ile Ser Lys Leu Lys Gln Leu Ser Tyr Ile Leu His Lys Ala Leu
            180                     185                     190
Arg Lys Ile Ser Phe Asn Val Arg Asp Lys Ile Tyr Leu Ser Val Phe
        195                     200                     205
Asn Ile Ser Lys Thr Val Tyr Lys Asn Asn Lys Asn His Val Leu Phe
        210                     215                     220
Thr Ser Asp Ser Arg Ala Asn Met Ser Gly Asn Phe Lys Phe Ile Tyr
225                     230                     235                     240
Glu Glu Met Leu Lys Gln Gln Leu Asp Lys Lys Leu Val Ile His Ser
                245                     250                     255
Ile Phe Lys Pro Asn Ile Ala Asn Arg Arg Ser Phe Ile Asp Lys Leu
            260                     265                     270
Lys Phe Pro Tyr Phe Leu Gly Lys Ser Lys Tyr Ile Leu Val Asp Asp
        275                     280                     285
Tyr His Pro Met Ile Tyr Lys Leu Gln Phe Arg Glu Asn Gln Glu Ile
        290                     295                     300
Val Gln Val Trp His Ala Val Gly Ala Phe Lys Thr Val Gly Phe Ser
305                     310                     315                     320
Arg Thr Gly Lys Lys Gly Gly Pro Phe Ile Asp Ser Ile Gly His Arg
                325                     330                     335
Asn Tyr Ser Lys Ala Tyr Val Ser Ser Asn Asn Asp Ile Leu Tyr Tyr
            340                     345                     350
Ala Glu Ala Phe Gly Ile Glu Glu His Arg Val Ile Pro Thr Gly Val
        355                     360                     365
Pro Arg Thr Asp Val Leu Phe Asp Glu Ser Tyr Lys Thr Arg Ile Lys
        370                     375                     380
Gln Ser Leu Glu Thr Lys Leu Pro Ile Ile Lys Asn Lys Lys Val Ile
385                     390                     395                     400
Leu Phe Ala Pro Thr Phe Arg Gly Asn Gly His Arg Thr Ala His Tyr
                405                     410                     415
Pro Phe Phe Lys Ile Asn Phe Ala Arg Leu Ala Ser Tyr Cys Glu Glu
            420                     425                     430
His Gln Ala Thr Val Leu Phe Lys Met His Pro Phe Val Arg Asn Lys
        435                     440                     445
Leu Asn Ile Pro Ala Ile Tyr Ser Lys Tyr Phe Leu Asp Ile Ser Asn
        450                     455                     460
Tyr Arg Glu Val Asn Asp Val Leu Phe Ile Thr Asp Ile Leu Ile Ser
                                  .
```

```
465                      470                      475                      480
Asp Tyr Ser Ser Leu Ile Tyr Glu Phe Ser Val Phe Lys Lys Pro Met
            485                      490                      495
Leu Phe Tyr Ala Phe Asp Leu Glu Asp Tyr Ile Tyr Thr Arg Asp Phe
        500                      505                      510
Tyr Glu Pro Tyr Glu Thr Phe Val Pro Gly Lys Ile Val Lys Thr Phe
        515                      520                      525
Asp Glu Leu Ile Leu Ala Leu Glu Asn Asn Asp Phe Glu Leu Glu Lys
    530                      535                      540
Val Lys Pro Phe Leu Asn Lys Asn Phe Lys Tyr Lys Asp Gly Lys Ser
545                      550                      555                      560
Ser Glu Arg Leu Val Lys Asp Leu Phe Asn Lys Phe Phe Gln
            565                      570
```

<210> 5442
<211> 94
<212> PRT
<213> S.epidermidis

<400> 5442
```
Phe Cys Val Phe Leu Thr Ile Thr Ser Pro Asp Cys Arg Leu Ile Ser
1               5                       10                      15
Ser Thr Cys Leu Asn Val Leu Ile Asn Lys Cys Leu Leu Phe Lys Val
            20                      25                      30
Gln Phe Arg His Arg Ile Leu Pro Pro Thr Leu Thr Val Lys His Leu
            35                      40                      45
Tyr Leu Thr Tyr Lys Lys Lys Thr Leu His Lys Gln Cys Leu Met Ile
        50                      55                      60
Met Phe Cys Tyr Leu Phe Glu Phe Met Tyr Ser Cys His Ile Ser Met
65                      70                      75                      80
Ser His Gln Tyr Ile Lys Lys Leu Pro Val Cys Ser His Gly
                85                      90
```

<210> 5443
<211> 128
<212> PRT
<213> S.epidermidis

<400> 5443
```
Arg Ser Thr Phe Lys Met Met Lys Val Phe Ile Ile Leu Gly Ala Leu
1               5                       10                      15
Asn Ala Met Met Ala Val Gly Thr Gly Ala Phe Gly Ala His Gly Leu
            20                      25                      30
Glu Asp Lys Leu Ser Asp Lys Tyr Met Ser Ile Trp Glu Lys Ala Thr
            35                      40                      45
Thr Tyr Gln Met Tyr His Gly Leu Gly Leu Leu Val Ile Gly Leu Ile
        50                      55                      60
Ser Gly Thr Ile Ser Ile Asn Val Asn Trp Ala Gly Trp Leu Leu Phe
65                      70                      75                      80
Phe Gly Ile Val Phe Phe Ser Gly Ser Leu Tyr Phe Leu Ala Leu Thr
            85                      90                      95
Gln Val Arg Ile Leu Gly Ala Ile Thr Pro Ile Gly Gly Val Leu Phe
            100                     105                     110
Ile Ile Gly Trp Leu Val Leu Val Ile Ala Thr Leu Lys Phe Ala Gly
        115                     120                     125
```

<210> 5444
<211> 307
<212> PRT
<213> S.epidermidis

<400> 5444
Lys Ile Lys Phe Lys His Ile Lys Arg Asn Ile Asn Ser Asp Ile Leu
1   5   10   15
Val Lys Asn Met Asn Ser Asp Val Val Gln Lys Ser Val Asp Asn Ala
            20   25   30
Val Lys Asp Asn Leu Ser His Lys Val Val Lys Asp Ala Met Ser Ile
            35   40   45
Ile Arg Asn Ile Met Lys Tyr Ile Gln Arg Lys Tyr Lys Leu Thr Asp
        50   55   60
Ile Ser Tyr Leu Asp Asp Ile Val Ile Pro Lys Lys Ala Thr Thr Arg
65   70   75   80
Glu Glu Val Lys Ala Lys Arg Glu Asn Tyr Leu Glu Met Asp Glu Val
                85   90   95
Lys Ala Ile Val Asp Asn Leu His Glu Ile Ala Asn Ser Lys Arg Ala
            100   105   110
Asp Tyr Met Lys Arg Ser Phe Ile Met Thr Ala Tyr Ile Met Glu Phe
        115   120   125
Gln Ala Leu Asn Gly Met Arg Ile Gly Glu Leu Leu Ala Ile Gln Pro
    130   135   140
Asn Asn Ile Asp Phe Asp Lys Lys Thr Leu Glu Ile Asp Gly Thr Ile
145   150   155   160
His Trp Arg Asn Glu Gly Asn Ala Val Gly Phe Lys Asp Thr Thr Lys
                165   170   175
Thr Glu Ser Ser Tyr Arg Thr Ile Ser Leu Thr Thr Arg Ser Cys Asp
                180   185   190
Ile Leu Arg Lys Val Met Leu Glu Asn Lys Lys Ala Ile Gln Trp Glu
        195   200   205
Ser Met Tyr Gln Asp Arg Gly Phe Ile Phe Thr Asn Tyr Arg Gly Asn
    210   215   220
Pro Met Ser Leu Ser Thr Ile Asn Arg Asn Met Gln Gln Ser Ala Asn
225   230   235   240
Asn Val Gly Ile Thr Lys His Ile Thr Ser His Thr Met Arg His Ser
                245   250   255
His Ile Ser Leu Leu Ser Gln Leu Gly Ile Ser Leu Lys Ala Ile Met
                260   265   270
Gln Arg Val Gly His Thr Asp His Lys Thr Thr Leu Gln Ile Tyr Ser
        275   280   285
His Val Thr Asp Gln Met Asp Lys Asp Met Met Asn Lys Leu Glu Lys
    · 290   295   300
Val Gly Asn
305

<210> 5445
<211> 267
<212> PRT
<213> S.epidermidis

<400> 5445
Ile Phe Phe Ser Leu Lys Ser Phe Pro Lys Lys Asn Ser Lys Gln Ile
1   5   10   15
Lys Glu Gly Leu Lys Val Asn Glu Leu Gln Thr Phe Asn Phe Glu Asp

```
                 20                          25                          30
Leu Pro Val Arg Thr Leu Ser Ile Asp Asp Glu Pro Tyr Phe Val Gly
         35                          40                          45
Lys Asp Val Ala Asp Ile Leu Gly Tyr Ser Arg Gly Ala Lys Ala Ile
     50                          55                          60
Gln Asp His Ile Asp Lys Glu Asp Ile Arg Val Val Pro Ile Gln Asp
65                          70                          75                          80
Arg Thr Gly Arg Tyr Gln Lys Ala Ser Leu Ile Asn Glu Ser Gly Leu
                 85                          90                          95
Tyr Thr Leu Val Ile Asp Ala Val Arg Gln Ser Asn Asn Arg Asp Ile
             100                         105                         110
Lys Lys Lys Ala Lys Ala Phe Lys Arg Trp Ile Thr Asn Glu Val Leu
             115                         120                         125
Pro Ser Ile Arg Lys Thr Gly Ser Tyr Gln Val Pro Asp Asn Pro Met
             130                         135                         140
Asp Ala Leu Lys Leu Met Phe Asp Ala Gln Lys Gln Thr Lys Glu Glu
145                         150                         155                         160
Ile Ala Thr Val Lys Ala Asp Val Ile Asp Leu Arg Glu Asn Gln Lys
                 165                         170                         175
Leu Asp Thr Gly Asp Tyr Asn Leu Leu Ser Arg Thr Ile Asn Gln Arg
             180                         185                         190
Val Ala His Ile Gln Lys Ile His Ala Ile Thr Asn Gln Lys Gln Arg
             195                         200                         205
Ser Glu Leu Phe Arg Asp Ile Asn Ser Glu Val Lys Lys Met Thr Gly
     210                         215                         220
Ala Thr Ser Arg Thr Asn Val Arg Gln Lys His Phe Asp Asp Val Ile
225                         230                         235                         240
Ser Met Val Ala Asn Trp Phe Pro Ser Gln Ala Thr Leu Tyr Arg Ile
                 245                         250                         255
Lys Gln Leu Glu Ser Asn Leu Glu Lys Gly Gln
             260                         265
```

<210> 5446
<211> 59
<212> PRT
<213> S.epidermidis

<400> 5446
```
Pro Arg Lys Phe His Ile Glu Ile Gln Gln Asn Arg Gln Val Leu Phe
1               5                           10                          15
Glu Val Lys Arg Gly Gln Gln Ile Gln Phe Glu Phe Asn Leu Thr Thr
             20                          25                          30
Ile Leu Phe Asn Lys Asn Thr Phe Gln Thr Lys Val Lys Met Thr Leu
         35                          40                          45
Leu Glu Asn Asp Ile Tyr Ser Ile Thr Asn Leu
     50                          55
```

<210> 5447
<211> 87
<212> PRT
<213> S.epidermidis

<400> 5447
```
Ile Met Lys Phe Thr Ile Glu Met Val Asn Glu Tyr Leu Thr Ile Val
1               5                           10                          15
Asn Asp Glu Asn Pro Ile His Arg Ser Ile Val Pro Gly Gln Leu Ile
```

```
                20                      25                      30
Cys Glu Lys Val Phe Ser Glu Leu Asn Val Asn Trp Met Asn Tyr Lys
        35                      40                      45
Ile Lys Tyr Leu Lys Pro Ile Asn Ile Asp Glu Glu Val Gln Phe Leu
    50                      55                      60
Ile Lys Glu Asn Asp Glu Ile Val Val Phe Lys Thr Tyr Asp Asp Thr
65                      70                      75                      80
Lys Leu Thr Ile Thr Arg Ser
                    85


<210> 5448
<211> 262
<212> PRT
<213> S.epidermidis


<400> 5448
Ser Ser Val Ser Tyr Asn Cys His Val Ile Tyr Asn Thr Ile Val Tyr
1               5                   10                      15
Val Thr Ile Ile Asn Ile Lys Ile Ile Phe Arg Arg Glu Leu Lys Leu
            20                      25                      30
Glu Trp Ile Leu Phe Asp Lys Asp Gly Thr Leu Ile Glu Phe Asp Ser
            35                      40                      45
Ser Trp Glu Lys Ile Gly Val Arg Leu Val Asp Gln Leu Leu Glu Thr
    50                      55                      60
Phe Pro Val His Asp Lys Glu Ala Ala His Arg Gln Leu Gly Ile Ile
65                      70                      75                      80
Asp Lys Lys Ile Lys Pro Asp Ser Val Met Gly Ser Gly Ser Leu Gly
                85                      90                      95
Glu Ile Ile Glu Ser Phe Asn Gly Val Thr Gly Lys Glu Thr Ser Asp
            100                     105                     110
Trp Thr Lys Asp Thr Ser Gln Glu Leu Ile Asp Ser Arg Val Pro Glu
            115                     120                     125
Asn Asn Trp Ile Asp Gly Val Gln Glu Thr Ile Gln Ala Leu Arg Asn
            130                     135                     140
Glu Gly Tyr His Ile Gly Ile Val Thr Ser Asp Thr Lys Lys Gly Val
145                     150                     155                     160
Asp Gln Phe Leu Glu Glu Thr Gln Thr Arg Asn Leu Phe Asp Leu Val
                165                     170                     175
Ile Ser Thr Glu Thr His Ala Glu Glu Lys Pro His Pro Lys Val Leu
            180                     185                     190
Asp Pro Leu Phe Asn Ala Phe Asp Val Lys Pro Glu Lys Val Ala Ile
            195                     200                     205
Val Gly Asp Thr Ala Asn Asp Met Lys Thr Ala Ile Asn Ala His Leu
            210                     215                     220
Gly Leu Ala Ile Gly Val Leu Thr Gly Val Ala Lys Lys Glu Glu Leu
225                     230                     235                     240
Tyr Asp Ala Asp Val Ile Ile Asn Ser Ala Lys Asp Val Lys Gln Val
                245                     250                     255
Ile Glu Gln Tyr Gly Lys
            260


<210> 5449
<211> 71
<212> PRT
<213> S.epidermidis
```

<400> 5449
Ser Ser Tyr Ser Ser Arg Tyr Thr Leu Gly Tyr Leu Tyr Arg Leu Asn
1   5   10   15
Asn Phe Phe Lys Ile Lys Pro Leu Thr Ile Asn Tyr Arg Ile Tyr Leu
                20   25   30
His Ile Leu Ile Val Val Ile Val Ile Ile Leu Leu Met Tyr Asn Leu
            35   40   45
Gln Ser Ile Leu Ile Asn Ile Trp Leu Phe Ile Ile His Thr Ile Asn
    50   55   60
Ser Arg Ser Glu Asn Asn Glu
65   70

<210> 5450
<211> 102
<212> PRT
<213> S.epidermidis

<400> 5450
Val Cys Tyr Ser Ser Ile Lys Ile Asp Asp Gln Thr Lys Lys Tyr Arg
1   5   10   15
Lys Lys Glu Thr Met Ile Met Asp Phe Val Glu Gln Ala Val Lys Glu
                20   25   30
Ile Lys Glu Lys Ile Gly Lys Glu Leu Asp Leu Glu Lys Glu Thr Tyr
            35   40   45
Leu Leu Gln Thr Pro Ser Ala Tyr Met Gln Ile Gly Leu Glu Glu Asp
    50   55   60
Asp Asp Asp Glu Arg Lys Leu Asn Val Gln Val Thr Gly Gly Asn Ile
65   70   75   80
Thr Cys Leu Lys Thr Asp Lys Asp Ile Phe Lys Asp Leu Tyr Val Asn
                85   90   95
Asp Asp Glu Asn Asp Asn
            100

<210> 5451
<211> 511
<212> PRT
<213> S.epidermidis

<400> 5451
Ile Met Glu Leu Glu Lys Val Gly Lys Leu Asp Leu Asn Glu Glu Pro
1   5   10   15
Tyr Leu Gln Pro Ile Ser Asn Arg Gly Ile Gly Phe Tyr Asn Leu Asp
                20   25   30
Lys Asn Thr Ala Lys Phe Gln Phe Val Val Gln Lys Asp Asn Lys Pro
            35   40   45
Leu Leu Ile Ser Asp Lys Asn Val Lys Gly Tyr Ala Phe Phe Lys Ala
    50   55   60
Ala Asn Gly Thr Glu Glu Lys Arg Pro Ser Thr Ser Gly Val Leu Asp
65   70   75   80
Val Glu Phe Ile Asp Pro Met Lys Gly Leu Ile Gly Val Thr Val Pro
                85   90   95
Gln Trp Phe Leu Lys Asn Val Val Asp Ser Glu Val Leu Gly Glu Ile
                100   105   110
Tyr Leu Ser Leu Asn Asp Val Asn Asn Val Gly Lys Asp Asp Thr Val
            115   120   125
Val Leu Gly Thr Phe Lys Phe Thr Val Arg Asp Ser Leu Ile Asn Gln

```
              130                    135                    140
Ile Glu Ser Asp Ile Lys Val Ser Tyr Ile Arg Met Phe Asp Glu Leu
145                    150                    155                    160
Arg Ser Glu Leu Glu Lys Lys Val Gln Gln Leu Lys Gln Asp Ile Gly
                  165                    170                    175
Asp Thr Gln Thr Leu Ile Glu Ser Ile Lys Gln Thr Ala Glu Glu Tyr
                  180                    185                    190
Leu Ile Lys Ile Asn Lys Ala Gln Ala Asp Ala Ile Val Ser Ile Thr
                  195                    200                    205
Asp Ala Leu Ile Ser Ser Asn Gln Ser Ile Asp Leu Glu Arg Glu Glu
                  210                    215                    220
Ala Leu Arg Gln Ile Asp Ala Lys Arg Asp Ala Ile Lys Thr Asp Tyr
225                    230                    235                    240
Asp Leu Ala Ser Asp Thr Phe Gln Lys Thr Tyr Asp Ser Asn Val Asp
                  245                    250                    255
Ala Phe Asn Ser Asn Val Asn Gln Ala Asn Thr Thr Ile Asp Glu Lys
                  260                    265                    270
Leu Gln Ile Phe Asn Glu Thr Leu Glu Arg Asp Gly Phe Thr Thr Pro
                  275                    280                    285
Glu Tyr Val Glu Ser Lys Phe Thr Glu Lys Asp Trp Gln Lys Phe Lys
                  290                    295                    300
Leu Thr Asn Asp Asp Gly Thr Asn Phe Tyr Asp Ala Asn Leu Gln Ile
305                    310                    315                    320
Asp Phe Asp Asn Asn Glu Gln Leu Met Ser Leu Pro Ile Gly Thr Arg
                  325                    330                    335
Tyr Val Val Leu Thr Leu Asn Asn Pro Ala Gly Thr Asn Asn Asn Gly
                  340                    345                    350
Trp Leu Thr Lys Tyr Lys Arg Asn Gly Asp Ala Val Leu Ile Gln Tyr
                  355                    360                    365
Gln Pro Tyr Asn Ser Thr Val Ile Tyr Gln Lys Arg Phe Tyr Lys Ser
                  370                    375                    380
Trp Ser Lys Trp Glu Arg Val Gly Ser Asp Val Val Asp Thr Gly Trp
385                    390                    395                    400
Ile Asp Leu Gln Leu Val Asn Ser Ala Ser Pro His Asn Asp Leu Val
                  405                    410                    415
Ser Lys Gly Gly Phe Thr Ser Ala Tyr Arg Thr Ile Thr Gln Asn Gly
                  420                    425                    430
Val Thr Lys Lys Met Leu Arg Ile Asn Ala Thr Thr Ile Lys His Gly
                  435                    440                    445
Gln Thr Ile Ala Leu Leu Pro Lys Glu Phe Val Lys Asn Leu Met Phe
                  450                    455                    460
Phe Ser Ile Ser Ala Pro Arg Asn Lys Asn Ser Gly Arg Ile Ser Leu
465                    470                    475                    480
Asn Thr Ser Gly Thr Val Asn Phe Asp Ala Thr Val Asp Pro Ser Ala
                  485                    490                    495
Trp Thr Asp Thr Asp Tyr Ile Tyr Gly Gln Tyr Glu Trp Thr Glu
                  500                    505                    510
```

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<210> 5452
<211> 133
<212> PRT
<213> S.epidermidis

<400> 5452
Ser Ser Gly His Tyr Asn Lys Leu Lys Ile Ile Ser Ile Leu Lys Arg
1                   5                     10                   15
```

Arg Asn Asn Lys Met Ser Asn Leu Glu Gln Asn Ile Lys Gln Met Lys
            20   25   30
Asn Glu Val Ile Glu Ala Glu Leu Asn Thr Lys Ile Asn Thr Val Ile
        35   40   45
Thr Met Ile Gly Glu His Met Asp Ser Asn Glu Arg Phe Lys Ser His
    50   55   60
Leu Asp Ala Gln Gly Lys Val Met Glu Ser Tyr Met Leu Lys Glu Tyr
65   70   75   80
Tyr Gln Asn Tyr Tyr Val Leu Met Ala Val Leu Asn Ser Ile Leu Lys
                85   90   95
Asp Val Asn Phe Met Asn Asp Glu Ile Thr Thr Phe His Asp Arg Ala
                100   105   110
Leu Asp Glu Leu Asp Lys Thr Lys Ala Ser Ser Glu Asn Phe Gly Glu
        115   120   125
Glu Ser Leu Asn Ala
        130

<210> 5453
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5453
Asn His Cys Phe Ile Asn Phe Tyr Lys Phe Phe Pro Tyr Thr Ile Thr
1   5   10   15
His Tyr Asp Lys Arg Thr Tyr Val Leu Leu Asn Leu Arg Phe Asn Pro
                20   25   30
Leu Thr Lys Ile Lys His Leu Ala Phe Phe Ser Phe Tyr Ile Gly Ala
            35   40   45
Thr His Tyr Met
        50

<210> 5454
<211> 69
<212> PRT
<213> S.epidermidis

<400> 5454
Met Asn Asn Asn Gln Phe Lys Val Ile Lys Glu Ile Tyr Asn Thr Leu
1   5   10   15
Gln Lys Thr Ile Glu Asp Lys Ser Thr Glu Tyr Lys His Lys Ile Lys
                20   25   30
Asp Gly Asn Asn Glu Trp Ile Glu Thr Val Asn Arg Glu Glu His Leu
            35   40   45
Gln Ala Leu Ile Glu Trp Ala Leu Gln Gln Ile Glu Asn Asn Phe Asp
        50   55   60
Phe Glu Glu Glu Lys
65

<210> 5455
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5455
Lys Leu Ser Lys Asn Arg Leu Ile Ile Phe Tyr Asn Leu Pro Cys Met

```
1                   5                           10                          15
Leu Leu Leu Phe Ile Ser Ser Glu Glu Gly Ile Thr Pro Phe Ile Leu
            20                          25                  30
Phe Lys Gly Lys Ser Tyr Arg Val Thr Ile Ile Ile Asn Gln Phe Cys
        35                      40                  45
Asn Ser Asn Ser Tyr Pro Phe Phe His Lys Met Lys
    50                  55                  60
```

<210> 5456
<211> 215
<212> PRT
<213> S.epidermidis

<400> 5456

```
Met Asn Met Asn Ile Glu Ile Ile Ala Asn Gln Phe Glu Thr Arg Ala
1                   5                           10                          15
Ala Thr Leu Leu Arg Tyr Tyr Thr Gly Leu Leu Glu Ser Ser Arg Asp
            20                          25                  30
Asn His Phe Ala Phe Lys Ile Tyr Asn Asp Pro Phe Asp Met Val Tyr
        35                      40                  45
Val Met Met Asn Gly Lys Leu Phe Gly His Val Tyr Ile Lys Asp Cys
    50                  55                  60
Lys Val Arg Asn Ser Phe Glu Leu Ala Ser Ser Lys His Thr Glu Gly
65                  70                  75                          80
Gln Ile Arg Ser Ile Glu Gly Tyr Tyr Asn Gly Phe Glu Ile His Asp
            85                          90                  95
Asp Lys His Leu Ser Ile Ser Asp Met Met Ala Arg Gln Leu Phe Glu
            100                     105                 110
Asp Glu Tyr Phe Met Tyr Gly Leu Glu Thr Phe Ala Glu Ser Asn Asn
            115                     120                     125
Thr Asp Met Phe Thr Tyr Ile Glu Gly Gly Leu Asn Val Glu Glu Leu
            130                     135                 140
Glu Gly Val Gln Ser Ser Asn Ala Asp Val Ile Gly Asn Ile Glu Ile
145                     150                     155                 160
Leu Tyr Gln Leu Ala Thr Gly Ile Asn Glu Pro Ala Ser Glu Leu Val
                165                     170                     175
Glu Ser Leu Lys Leu Val Thr Ala Phe Val Gln Asp Glu Asn Ala Thr
            180                     185                     190
Gln Asp Asp Tyr Lys Thr Leu Glu Arg Lys Leu Ser Glu Leu Lys Thr
            195                     200                     205
Ser Tyr Tyr Ser Val Ser Lys
    210                 215
```

<210> 5457
<211> 291
<212> PRT
<213> S.epidermidis

<400> 5457

```
Lys Leu Ser Glu Ile Lys Leu Glu Tyr Asp Thr Gln Val Ser Val Ile
1                   5                           10                          15
Trp Tyr Gly Thr Leu Asp Ser Arg Ser Phe Lys Gln Phe Ser Gln Pro
            20                          25                  30
Lys Trp Ser Glu Leu Val Asn Arg Leu Ser Ile Pro Gln Asn Asn Thr
        35                      40                  45
Asn Lys Tyr Ala Arg Gly Val Ala Val Tyr Gly Asp Met Lys Asp Asp
```

```
       50                     55                    60
Thr Asp Glu Asn Gly Asn Glu Tyr Lys Lys Tyr Arg Lys Asp Gly Asn
65                      70                  75                  80
Val Ile Tyr Arg Asp Val Leu Val Leu Asp Tyr Asp Asp Ile Pro Lys
                85                  90                  95
Leu Arg Leu Leu His Asp Ala Ile Thr Glu Thr Leu Lys Gly Val Ser
                100                 105                 110
Trp Met Tyr His Thr Thr Phe Asn His Arg Thr Glu Ser Pro Arg Ile
            115                 120                 125
Arg Leu Tyr Ile Ala Leu Ser Glu Arg Ile Ser Ala Asp Asp Tyr Arg
            130                 135                 140
Lys Tyr Thr Lys Val Leu Ala Asn Lys Ile Gly His Leu Val Asp Glu
145                 150                 155                 160
Gly Ser Phe Gln Pro Ser Arg Ala Met Ala Leu Pro Val Tyr Ile Lys
                165                 170                 175
Gly Lys His Pro Phe Leu His Gln Tyr Asn Asp Ala Pro Ile Leu Asn
            180                 185                 190
Val Glu Met Leu Glu Lys Trp Ser Lys Glu Thr Asn Ile Gln Thr Asp
            195                 200                 205
Gln Pro Ser Lys Thr Asn Phe Asn Lys Arg Asp Asp Thr Tyr Trp Arg
            210                 215                 220
Asp Ile Ser Phe Ser Val Thr Lys Gly Asn Arg Asn Asn Ser Leu Ala
225                 230                 235                 240
Ser Leu Ile Gly His Leu Phe Ser Arg His Val Asn Glu Tyr Ile Val
                245                 250                 255
Tyr Ser Tyr Ala Leu Leu Trp Gly Gln Asn Ala Cys Asn Pro Pro Leu
                260                 265                 270
Asn Glu Arg Glu Ile Asn Ala Thr Phe Gln Ser Ile Leu Lys Lys His
            275                 280                 285
Arg Asn Lys
    290
```

```
<210> 5458
<211> 54
<212> PRT
<213> S.epidermidis

<400> 5458
Ser Pro Val Ser Pro His Leu Ile Phe Ile Ser Gly Tyr Ser Gln Thr
1               5                   10                  15
Leu Val Thr Ala Ala Phe Asn Glu Phe Ser Thr Arg Cys Thr Arg Ile
            20                  25                  30
Phe Tyr Asn Arg Lys Pro Val Leu Tyr Glu Tyr Ser Tyr Lys Gln Leu
        35                  40                  45
Thr Leu Ile Lys Cys His
    50
```

```
<210> 5459
<211> 145
<212> PRT
<213> S.epidermidis

<400> 5459
Lys Leu Ser Gly Asp Ser Leu Gly Thr Ser Thr His Phe Glu Lys Ile
1               5                   10                  15
Leu Lys Lys Phe Trp Arg Leu His Met Asp Lys Glu Gln Leu Lys Gln
```

```
                  20                        25                        30
His Met Tyr Asp Tyr Val Lys Glu His Lys Glu Ile Pro Ile Tyr Gln
        35                        40                        45
Leu Glu Asp Leu Phe Lys Glu Leu Asp His Asp Tyr Lys Gly Lys Ala
        50                        55                        60
Ser Val Thr Asn Glu His Asp Lys Asn Ile Val Phe Trp Ser Gly Trp
65                        70                        75                        80
Asn Lys Leu Thr Met Tyr Ala Leu Ile Glu Leu Val Lys Gly Glu His
                  85                        90                        95
Leu Asp Leu Ile Tyr Arg Ala Ser Tyr Val Met Arg Tyr Leu Leu Asp
                  100                       105                       110
Gly Arg Val Pro Ser Leu Pro Leu Ala Ile Thr Tyr Pro Glu Tyr Gly
                  115                       120                       125
Gln Gln Thr Glu Val Pro Ser Trp Val Pro Met Leu Leu Arg Val Thr
        130                       135                       140
Lys
145
```

<210> 5460
<211> 575
<212> PRT
<213> S.epidermidis

<400> 5460

```
Val Glu Arg Gly Lys Tyr Met Glu Leu Thr Lys Asp Asp Ile Leu His
1                 5                        10                        15
Glu Ile Glu Lys Thr Lys Gln Glu Lys Asp Ala Ile His Glu Val Ile
                  20                        25                        30
Pro Lys Gly Tyr Glu Ile Glu Gln His Gln Asn Gly Val Ala Leu Tyr
        35                        40                        45
Gln Ile Ile Pro Ser Lys Lys Asp Gly Glu Pro Asp Lys Lys Ile Phe
        50                        55                        60
Ile Thr Asn Thr Ile Pro Gln Ile Thr Glu Arg Phe Glu Asp Ile Glu
65                        70                        75                        80
Ser Asn Glu Val Ser Tyr Asn Met Leu Phe Tyr Asp Asn Gln Ile Pro
                  85                        90                        95
Val Asn Leu Gly Val Ser Ala Glu Glu Ile Ala Asp Ser Arg Gln Leu
                  100                       105                       110
Leu Lys Leu Val Asn Arg Lys Phe Asp Val Thr Ser Thr Thr Ser Thr
        115                       120                       125
Arg Leu Val Asp Tyr Ile Asn Lys Ser Lys Arg His Asn Pro Pro Val
        130                       135                       140
Asn Ile Lys Val Ala Thr Arg Leu Gly His Val Lys Gly Tyr Phe Ile
145                       150                       155                       160
Tyr Pro Tyr Lys Glu Glu Met Lys Asn Arg Asn Ile Lys Leu Phe Asn
                  165                       170                       175
Asn Asp Lys Gly Phe Gln Lys Leu Ile Asp Ser Phe Gln Ser Lys Gly
                  180                       185                       190
Thr Leu Glu Ser Tyr Ser Glu His Val Phe Ser Lys Ile Lys Ser Leu
        195                       200                       205
Pro Met Val Met Val Met Leu Tyr Ala Ser Leu Gly Ser Val Leu Leu
        210                       215                       220
Arg Glu Phe Glu Leu Gln Pro Phe Ile Val Glu Ile Ser Gly Ser Thr
225                       230                       235                       240
Ser Thr Gly Lys Thr Phe Thr Leu Asn Leu Val Ser Ser Val Trp Gly
                  245                       250                       255
```

```
Thr Ser Asn Leu Ile Thr Thr Trp Ser Ser Thr Asn Asn Ser Ile Glu
            260                 265                 270
Ala Met Ala Ser Phe Leu Asn Ser Phe Pro Met Phe Lys Asp Asp Thr
            275                 280                 285
Arg Asn Thr His Pro Lys Phe Val Ala Asn Ala Thr Tyr Asn Phe Ser
            290                 295                 300
Ser Gly Glu Ser Lys Ser Arg Ser Asn Ile Asn Leu Thr Leu Asn Ala
305                 310                 315                 320
Lys Lys Glu Trp Arg Asn Ile Leu Leu Ser Thr Gly Glu Ala Ser Ile
            325                 330                 335
Ser Asn Met Ala Asp Glu Lys Ala Gly Val Ser Ala Arg Val Val Thr
            340                 345                 350
Leu Gln Asp Gln Pro Tyr Pro Asp Asn Phe Asp Phe Thr Thr Leu Asp
            355                 360                 365
Lys Ala Phe Arg Asp Asn Tyr Gly Thr Leu Gly Lys Val Phe Ile Lys
            370                 375                 380
Gln Tyr Gln Ser Lys Gln Glu Ser Tyr Lys Asn Ala Phe Glu Ser Tyr
385                 390                 395                 400
Gln Arg Tyr Phe Asn Gln Lys Gly Ser Asn Glu Ile Met Gln Arg Leu
            405                 410                 415
Gly His Ala Phe Ala Leu Leu Gln Val Ser Gly Glu Ile Leu Asn Asp
            420                 425                 430
Ile Glu Gly Phe Glu His Asp His Phe Lys Ile Ile Glu Gln Ala Tyr
            435                 440                 445
Asn Ser Met Val Arg Asn Asn Lys Thr Ile Asp Lys Pro Lys Gln Leu
            450                 455                 460
Leu Glu Glu Leu Leu Gln Tyr Leu Asp Ala Asn Arg Asn Asn Ile Ala
465                 470                 475                 480
Gly Glu Gly Tyr Ser Ser Val Lys Asn Gly Asp Ile Lys Ala Ile Tyr
            485                 490                 495
Lys Arg Asp Tyr Leu Cys Ile Leu Gly Glu Thr Val Lys Glu Lys Leu
            500                 505                 510
Arg Tyr Glu Met Gln Thr Ile Thr Gly Gln Trp Asp Lys Lys Gly Tyr
            515                 520                 525
Leu Ile Lys Gly Glu Lys Asp Arg Leu Gln Lys Gln Val Lys His Glu
            530                 535                 540
Thr Val Lys Tyr Arg Gly Phe Ala Ile Arg Gln Glu Val Leu Glu Glu
545                 550                 555                 560
Leu Gly Phe Asp Phe Ser Asn Ser Tyr Asn Pro Asn Ser Asp Tyr
            565                 570                 575
```

<210> 5461
<211> 59
<212> PRT
<213> S.epidermidis

<400> 5461
```
Leu Leu Phe Ile Tyr Ser Thr Ser Lys Asn Asn Pro Tyr Ala Asp Ala
1               5                   10                  15
Lys Ile Lys Ile Ala Lys Ala Ile Lys Thr Ser Asn Ile Lys Ala Thr
            20                  25                  30
Asp Lys Val Ile Lys Ile Ile Ile Pro Ile Tyr Arg Lys Cys Asn Phe
            35                  40                  45
Ile Phe Ser Thr Pro Phe Tyr Ile Gln Ser Leu
    50                  55
```

<210> 5462
<211> 53
<212> PRT
<213> S.epidermidis

<400> 5462
Leu Tyr Tyr Ser Lys Phe Thr Leu Lys Thr Gln Thr Tyr Val Leu Val
1   5   10   15
Leu Thr His Phe Ile Leu Cys Leu Thr Thr Leu Lys Ile Ile Val Leu
            20   25   30
Ser Thr Phe Ile Ser Phe Phe His Ile Leu Ser His Thr Met Ile Lys
        35   40   45
Glu Arg Met Phe Cys
    50

<210> 5463
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5463
Pro Ser Cys Ser Asn Leu Glu Ile Ile Glu Ser Ile Glu Ser Arg Asp
1   5   10   15
Ile Leu Ala Arg Thr Val Val Val Thr Gly Ser Lys Lys Asp Arg Ala
            20   25   30
Met Phe Ser Val Phe Ser Thr Pro Lys Cys Val Thr Gln
        35   40   45

<210> 5464
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5464
Asp Leu Ile Ser Val Glu Leu Tyr Tyr Cys Thr Leu Glu Asn Lys Lys
1   5   10   15
Gly Ala Ser Phe Asn Glu Thr Pro Phe Cys Tyr Ser Val Leu Gly Gly
            20   25   30
Ile Arg Thr Pro Asp Arg Trp Leu Arg Arg Pro Leu Leu Tyr Pro Ala
        35   40   45
Glu Leu Pro Gly His Phe Gln His Lys Asn Tyr Tyr Ile
    50   55   60

<210> 5465
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5465
Glu Thr Ile Ser Pro Ala Ser Lys Leu Arg Phe Asn Pro Pro Lys Val
1   5   10   15
Glu Ala Gln Asn Val Gln Pro Ile Leu His Pro Thr Cys Val Val Thr
            20   25   30
Gln Thr Glu Phe Pro Tyr Ser Cys Leu Ile Lys Thr Val Ser Ile Val
        35   40   45

<210> 5466
<211> 220
<212> PRT
<213> S.epidermidis

<400> 5466
Asn Ser Ser Ser Leu Gln Thr Phe Lys Ile Phe Lys Ser Ser Ile Cys
1   5   10   15
Asn Asn Lys Thr Leu Ile Phe Tyr Lys Tyr Gly Tyr Lys Ser Leu Leu
            20   25   30
Lys Phe Tyr Leu Lys Gly Cys His Tyr Met Gly Ile Arg Ser Lys Leu
        35   40   45
Thr Asn Asn Ile Thr Asn Lys Val Gly Asn Ser Leu Leu Asn Ile Glu
    50   55   60
Glu Ile Lys Glu Lys Gly Asp Leu Pro Thr Thr Gln Glu Glu Leu Arg
65   70   75   80
Gln Arg Arg Glu Arg Ala Glu Thr Leu Val Lys Lys Lys Ser Leu Leu
                85   90   95
Ser Ser Gly Ala Ser Ile Val Pro Ile Pro Gly Leu Asp Phe Gly Val
            100   105   110
Asp Leu Lys Leu Met Arg Asp Ile Ile Glu Asp Val Asn Lys Ile Tyr
        115   120   125
Gly Leu Asp His Asp Gln Val Asn Ser Leu Ser Asp Gln Val Lys Glu
    130   135   140
Arg Ile Met Ser Ala Ala Ala Ile Gln Gly Ser Gln Phe Ile Gly Arg
145   150   155   160
Lys Val Ser Glu Ala Leu Leu Lys Val Val Ile Lys Asp Val Ala Lys
                165   170   175
Arg Ala Ala Ala Lys Gln Thr Lys Trp Phe Pro Phe Val Gly Gln Ala
            180   185   190
Val Ser Ala Ser Ile Ser Tyr Tyr Phe Met Ser Lys Leu Gly Lys Asp
        195   200   205
His Ile Asn Lys Cys Glu Lys Val Ile Asn Asn Leu
    210   215   220

<210> 5467
<211> 47
<212> PRT
<213> S.epidermidis

<400> 5467
Lys Phe Thr Ser Leu Ile Gly Phe Leu Phe Thr Gln Met Phe Tyr Pro
1   5   10   15
Val Ile Leu Leu Ile Asn Val Cys Arg Thr Ile Asp Val Phe His Asp
            20   25   30
Ile Leu Lys Thr Ile Lys Arg Ser Ser Tyr Ile Ile Ile Leu Arg
        35   40   45

<210> 5468
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5468
Ile Asn Asp Ser Asn Arg Phe Ile His Thr Ser Ser Pro Leu Phe Leu
1   5   10   15

Gln Leu Pro Tyr Ile Val Ser Gln Tyr His Ile Thr Val Asp Ile Tyr
                20   25   30
Val Tyr Ser Ser Cys Lys Val Ile Phe Leu Ser Leu Phe Tyr Asn His
        35   40   45
Gln Lys Met Thr Lys Ala Arg Leu Pro Trp Ser Leu
    50   55   60

<210> 5469
<211> 357
<212> PRT
<213> S.epidermidis

<400> 5469
Met Lys Arg Phe Phe Gln Leu Ile Ile Ser Ala Ile Val Ile Gly Ile
1   5   10   15
Leu Cys Leu Met Ile Ser His Trp Phe Lys Ser Lys Asp Asn Thr His
                20   25   30
Ser Asn Glu Lys Leu Tyr Val Tyr Asn Trp Gly Glu Tyr Ile Asp Pro
        35   40   45
Ser Leu Ile Lys Lys Phe Glu Lys Glu Thr Gly Ile Gln Val Val Tyr
    50   55   60
Glu Thr Phe Asp Ser Asn Glu Ala Met Glu Ala Lys Ile Arg Asn Gly
65   70   75   80
Gly Thr His Tyr Asp Val Ala Phe Pro Ser Glu Tyr Thr Val Gln Lys
                85   90   95
Leu Lys Lys Ala Lys Leu Leu Glu Thr Leu Asn His Asp Lys Ile Pro
                100   105   110
Asn Ile Arg Asn Leu Asp Asn Asp Tyr Met Asn Leu Ser Tyr Asp Pro
            115   120   125
Asn Asn Arg Tyr Ser Ile Pro Tyr Phe Phe Gly Thr Val Gly Ile Leu
        130   135   140
Tyr Asp Lys Glu Lys Tyr Pro Asn Glu Thr Phe Asp Ser Trp Asp Asp
145   150   155   160
Leu Tyr His Ser Gln Phe Lys Asn Asp Ile Leu Leu Val Asp Gly Ala
                165   170   175
Arg Glu Ile Ile Gly Met Gly Leu Asn Lys Leu Gly Tyr Ser Leu Asn
                180   185   190
Asp Lys Asn Pro Thr His Ile Tyr Gln Ala Glu Lys Asp Leu His Asn
            195   200   205
Leu Ala Pro Gln Val Arg Gly Ile Val Gly Asp Glu Ile Thr Met Met
    210   215   220
Leu Gln Gln Asn Glu Gly His Val Ala Val Val Trp Ser Gly Val Ala
225   230   235   240
Ala Pro Leu Val Gln Glu Asn Thr Arg Tyr Asn Tyr Val Ile Pro Lys
                245   250   255
Glu Gly Ser Asn Leu Trp Phe Asp Asn Met Val Ile Pro Lys Thr Ala
                260   265   270
Gln Asn Lys Glu Gly Ala Tyr Lys Phe Met Asn Phe Leu Leu Asp Ala
        275   280   285
Gln Asn Ser Ala Gln Asn Thr Glu Trp Val Gly Tyr Ala Thr Pro Asn
    290   295   300
Lys Ala Ala Arg Ser Lys Leu Pro Lys Lys Val Arg Asn Asp Tyr Arg
305   310   315   320
Phe Tyr Pro Ser Asn Gln Glu Gln Gln Arg Leu Glu Val Tyr Lys Asp
                325   330   335
Leu Gly Gln Thr Ser Leu Ser Glu Tyr Asn Glu Ser Phe Leu Asn Phe

```
            340                    345                       350
Lys Met Ser Leu Lys
        355


<210> 5470
<211> 318
<212> PRT
<213> S.epidermidis


<400> 5470
Phe Thr Ile Ser Leu Tyr Tyr Met Arg Asn Leu Arg Arg Gly Ile Met
1               5                   10                  15
Asn Lys Asp Gln Thr Leu Ser His Thr Thr Gly Arg Val Ser Phe Lys
            20                  25                  30
Glu Leu Gln Gln Ile Ile Lys Met Ala Leu Val Gln Gly Asn Leu Ile
        35                  40                  45
Pro Ala Phe Ala Gly Ala Trp Leu Ala Ile Val Met Thr Asn His Ser
        50                  55                  60
Phe Leu Ser Ser Ile Pro Gln Ile Leu Leu Met Leu Val Gly Ser Thr
65                  70                  75                  80
Leu Ile Met Gly Gly Ala Cys Ala Leu Asn Asn Tyr Tyr Asp Gln Asp
                85                  90                  95
Ile Asp Arg Ile Met Pro Ser Lys Gln Ser Arg Pro Thr Val Asn Asp
            100                 105                 110
Arg Ile Ser Asp Arg Asn Leu Leu Met Leu Ser Phe Gly Met Met Leu
            115                 120                 125
Ile Gly Glu Ala Cys Leu Phe Leu Leu Asn Ile Pro Ser Gly Val Leu
            130                 135                 140
Gly Leu Ile Gly Ile Val Gly Tyr Val Ser Tyr Tyr Ser Ile Trp Ser
145                 150                 155                 160
Lys Arg His Thr Thr Trp Asn Thr Val Val Gly Ser Phe Pro Gly Ala
                165                 170                 175
Val Pro Pro Leu Ile Gly Trp Val Ala Ile Asp Gly Ser Leu Ser Leu
                180                 185                 190
Ala Ala Val Ala Leu Phe Leu Val Val Phe Cys Trp Gln Pro Ile His
            195                 200                 205
Phe Tyr Ala Leu Ala Ile Lys Arg Ser Asp Glu Tyr Ala Leu Ala Asn
    210                 215                 220
Ile Pro Met Leu Pro Ser Val Lys Gly Phe Lys Arg Thr Arg Val Ser
225                 230                 235                 240
Met Phe Ile Trp Leu Val Leu Leu Leu Pro Leu Pro Phe Leu Leu Ser
                245                 250                 255
Asn Leu Gly Val Thr Phe Val Val Ile Ala Thr Leu Leu Asn Leu Gly
            260                 265                 270
Trp Leu Ala Leu Gly Phe Thr Thr Phe Arg Lys Glu Ser Asn Gln Thr
        275                 280                 285
Lys Trp Ala Thr Gln Met Phe Val Tyr Ser Leu Asn Tyr Leu Val Val
    290                 295                 300
Phe Phe Ala Leu Val Val Val Val Ser Leu Ile Lys Met Ile
305                 310                 315


<210> 5471
<211> 457
<212> PRT
<213> S.epidermidis
```

<400> 5471

```
Val Tyr Gly Leu Glu Cys Ile Lys Leu Leu Asn Tyr Thr Glu Leu Glu
1               5                   10              .       15
Asn Lys Asn Val Leu Val Val Gly Leu Ala Lys Ser Gly Tyr Glu Ala
            20                  25              30
Ala Lys Leu Leu Leu Lys Leu Gly Ala Asn Val Lys Val Asn Asp Gly
        35                  40                  45
Lys Asp Leu Ser Gln Asp Ala His Ala Lys Asp Leu Glu Ser Met Gly
    50                  55                  60
Ile Glu Val Ile Ser Gly Ser His Pro Phe Ser Leu Leu Asp Asp Asp
65                  70                  ·75                     80
Pro Ile Ile Val Lys Asn Pro Gly Ile Pro Tyr Thr Val Ser Ile Ile
                85                  90                  95
Lys Glu Ala Ala Asn Arg Gly Leu Lys Ile Leu Thr Glu Val Glu Leu
            100                 105                 110
Ser Tyr Leu Ile Ser Glu Ala Pro Ile Ile Ala Val Thr Gly Thr Asn
        115                 120                 125
Gly Lys Thr Thr Val Thr Ser Leu Ile Gly Asp Met Phe Gln Lys Ser
    130                 135                 140
Val Leu Thr Gly Arg Leu Ser Gly Asn Ile Gly Tyr Val Ala Ser Lys
145                 150                 155                 160
Val Ala Gln Glu Val Lys Ser Asp Glu Tyr Leu Ile Thr Glu Leu Ser
                165                 170                 175
Ser Phe Gln Leu Leu Gly Ile Glu Glu Tyr Lys Pro His Ile Ala Ile
        180                 185                 190
Ile Thr Asn Ile Tyr Ser Ala His Leu Asp Tyr His Glu Thr Leu Glu
        195                 200                 205
Asn Tyr Gln Asn Ala Lys Lys Gln Ile Tyr Lys Asn Gln Thr Lys Asp
    210                 215                 220
Asp Tyr Leu Ile Cys Asn Tyr His Gln Arg His Leu Ile Glu Ser Glu
225                 230                 235                 240
Asn Leu Glu Ala Lys Thr Phe Tyr Phe Ser Thr Gln Gln Glu Val Asp
                245                 250                 255
Gly Ile Tyr Ile Lys Asp Gly Phe Ile Val Phe Asn Gly Ile Arg Ile
                260                 265                 270
Ile Asn Thr Lys Asp Leu Val Leu Pro Gly Glu His Asn Leu Glu Asn
        275                 280                 285
Ile Leu Ala Ala Val Leu Ala Ser Ile Ile Ala Gly Val Pro Val Lys
    290                 295                 300     .
Ala Ile Val Asp Ser Leu Val Thr Phe Ser Gly Ile Asp His Arg Leu
305                 310                 315                 320
Gln Tyr Ile Gly Thr Asn Arg Thr Asn Lys Tyr Tyr Asn Asp Ser Lys
                325                 330                 335
Ala Thr Asn Thr Leu Ala Thr Gln Phe Ala Leu Asn Ser Phe Asp Gln
            340                 345                 350
Pro Ile Ile Trp Leu Cys Gly Gly Leu Asp Arg Gly Asn Glu Phe Asp
        355                 360                 365
Glu Leu Ile Pro Tyr Met Glu Asn Val Arg Val Met Val Val Phe Gly
    370                 375                 380
Glu Thr Gln Asp Lys Phe Ala Lys Leu Gly Asn Ser Gln Gly Lys Tyr
385                 390                 395                 400
Val Ile Lys Ala Thr Asp Val Glu Asp Ala Val Asp Lys Ile Gln Asp
                405                 410                 415
Ile Val Glu Pro Asn Asp Val Val Leu Leu Ser Pro Ala Cys Ala Ser
            420                 425                 430
Trp Asp Gln Tyr His Thr Phe Glu Glu Arg Gly Glu Lys Phe Ile Asp
```

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           435                    440                     445
Arg Phe Arg Ala His Leu Pro Ser Tyr
    450                 455


<210> 5472
<211> 60
<212> PRT
<213> S.epidermidis


<400> 5472
Val Leu Lys Ser Leu Gly Asn Pro Ile Thr Ser Phe Ile Ser Tyr Thr
1               5                   10                  15
Ile Leu Phe Trp Ala Asn Val Phe Phe Ile Thr Phe Leu Asn Ala Leu
            20                  25                  30
Arg Glu Asn Ala Leu Glu Phe Val His Asn Ser Asn Val Pro Pro Gly
        35                  40                  45
Asp Lys Met Leu Arg Ala Pro Ser Ile Asn Lys Leu
    50                  55                  60


<210> 5473
<211> 413
<212> PRT
<213> S.epidermidis


<400> 5473
Val Lys Phe Leu Ala Ser Gln Leu Phe Lys Gly Gly Phe Phe Ile Asp
1               5                   10                  15
Tyr Leu Gly Val Asp Ile Ser Lys Arg Ser Ser Val Val Ala His Tyr
            20                  25                  30
Lys Asn Gly Lys Phe Gln Lys Glu Phe Phe Ile Gln Asn Asn Lys Asn
        35                  40                  45
Gly Tyr Asn Tyr Leu Leu Lys Tyr Leu Asn Asp Leu His His Pro Gln
    50                  55                  60
Leu Ile Phe Glu Ser Thr Gly Ile Tyr Ser Arg Gly Met Gln Arg Phe
65              70                  75                  80
Cys Cys Val Asn Gln Ile Asn Tyr Ile Gln Met Asn Pro Leu Glu Ala
            85                  90                  95
Lys Phe Lys Thr Ser Thr Leu Arg Ser Trp Lys Thr Asp Gln Ala Asp
            100                 105                 110
Ala His Lys Leu Ala Cys Leu Gly Pro Thr Leu Lys Gln Thr Gly Asn
        115                 120                 125
Leu Pro Ile His Glu Leu Ile Phe Phe Glu Leu Arg Glu Arg Val Arg
    130                 135                 140
Phe His Leu Glu Ile Glu Asn Glu Gln Asn Arg Leu Lys Phe Gln Ile
145             150                 155                 160
Leu Glu Leu Leu His Gln Thr Phe Pro Gly Leu Glu Arg Leu Phe Ser
                165                 170                 175
Ser Arg Tyr Ser Ile Ile Ala Leu Asn Ile Ala Glu Ile Phe Thr His
            180                 185                 190
Pro Asp Met Val Leu Asp Ile Asp Lys Asp Val Leu Ile Thr His Ile
        195                 200                 205
Phe Asn Ser Thr Asp Lys Gly Met Ser Met Asp Lys Ala Thr Lys Tyr
    210                 215                 220
Ala Leu Gln Leu Arg Val Ile Ala Gln Glu Ser Tyr Pro Asn Val Asp
225                 230                 235                 240
Arg His Ser Phe Leu Val Glu Lys Leu Arg Leu Leu Ile Gln Gln Leu
```

```
              245                    250                    255
Lys Gln Ser Ile His His Leu Lys Gln Leu Asp Asp Ala Met Ile Gln
          260                    265                    270
Leu Ala Gln Gln Leu Asp Tyr Phe Glu Asn Ile His Ser Ile Pro Gly
          275                    280                    285
Ile Gly Lys Leu Ser Thr Ala Met Ile Ile Gly Glu Ile Gly Asp Ile
          290                    295                    300
Lys Arg Phe Lys Ser Asn Lys Gln Leu Asn Ala Phe Val Gly Ile Asp
305                    310                    315                    320
Ile Lys Arg Tyr Gln Ser Gly His Thr His Cys Arg Asp Thr Ile Asn
                  325                    330                    335
Lys Arg Gly Asn Lys Lys Ala Arg Lys Leu Leu Phe Trp Val Ile Met
          340                    345                    350
Asn Ile Ile Arg Gly Gln His His Tyr Asp Asn His Val Val Asp Tyr
          355                    360                    365
Tyr Tyr Lys Leu Arg Lys Gln Pro Asn Glu Lys Pro His Lys Thr Ala
          370                    375                    380
Ile Ile Ala Cys Ile Asn Arg Leu Leu Lys Thr Ile His Tyr Leu Val
385                    390                    395                    400
Met Asn His Lys Leu Tyr Asp Tyr Gln Met Ser Pro His
                  405                    410
```

<210> 5474
<211> 574
<212> PRT
<213> S.epidermidis

<400> 5474

```
Ile Ile Met Ser Lys Leu Ile Lys Gly Ile Ala Ala Ser Asp Gly Val
1                   5                    10                    15
Ala Ile Ala Lys Ala Tyr Leu Ile Val Glu Pro Asp Leu Ser Tyr Asp
                  20                    25                    30
Ser Asn Glu Lys Val Thr Asp Ile Glu Ser Glu Val Glu Lys Phe Asn
          35                    40                    45
Asp Ala Ile Glu Ala Ser Lys Ile Glu Leu Thr Lys Ile Arg Asn Asn
    50                    55                    60
Ala Glu Ala Gln Leu Gly Ala Asp Lys Ala Ala Ile Phe Asp Ala His
65                    70                    75                    80
Leu Leu Val Leu Asp Asp Pro Glu Leu Ile Gln Pro Ile Gln Asp Lys
                  85                    90                    95
Ile Arg Asn Asp Lys Val Asn Ala Ala Thr Gly Leu Asp Glu Val Thr
          100                    105                    110
Thr Gln Phe Ile Ser Ile Phe Glu Ser Met Asp Asn Glu Tyr Met Lys
          115                    120                    125
Glu Arg Ala Ala Asp Ile Arg Asp Val Ser Lys Arg Val Leu Ala His
          130                    135                    140
Ile Leu Gly Val Asp Leu Pro Asn Pro Ser Leu Ile Asn Glu Ser Ala
145                    150                    155                    160
Val Ile Val Gly Asn Asp Leu Thr Pro Ser Asp Thr Ala Gln Leu Asn
                  165                    170                    175
Lys Glu Phe Val Gln Gly Phe Val Thr Asn Ile Gly Gly Arg Thr Ser
          180                    185                    190
His Ser Ala Ile Met Ser Arg Ser Leu Glu Ile Ala Ala Val Val Gly
          195                    200                    205
Thr Lys Ser Ile Thr Glu Glu Val Lys Gln Gly Asp Met Ile Ile Val
          210                    215                    220
```

Asp Gly Met Ser Gly Asp Val Ile Ile Asp Pro Thr Glu Asp Glu Leu
225   230   235   240
Ile Ala Tyr Gln Asn Lys Arg Glu Arg Phe Phe Glu Asp Lys Lys Glu
                245   250   255
Leu Gln Lys Leu Arg Asp Ala Asp Thr Val Thr Val Asp Gly Val His
                260   265   270
Ala Glu Leu Ala Ala Asn Ile Gly Thr Pro Asp Asp Leu Ser Gly Val
                275   280   285
Ile Asp Asn Gly Ala Gln Gly Ile Gly Leu Tyr Arg Thr Glu Phe Leu
        290   295   300
Tyr Met Gly Arg Asp Gln Met Pro Thr Glu Glu Glu Gln Phe Glu Ala
305   310   315   320
Tyr Lys Lys Val Leu Glu Thr Met Asp Gly Lys Arg Val Val Val Arg
                325   330   335
Thr Leu Asp Ile Gly Gly Asp Lys Glu Leu Pro Tyr Leu Asp Leu Pro
                340   345   350
Lys Glu Met Asn Pro Phe Leu Gly Tyr Arg Ala Ile Arg Leu Cys Leu
                355   360   365
Ala Gln Pro Glu Ile Phe Arg Pro Gln Leu Arg Ala Leu Leu Arg Ala
        370   375   380
Ser Val Tyr Gly Lys Leu Asn Ile Met Phe Pro Met Val Ala Thr Ile
385   390   395   400
Lys Glu Phe Arg Asp Ala Lys Ser Met Leu Leu Glu Glu Lys Glu Asn
                405   410   415
Leu Leu Arg Glu Gly Tyr Glu Val Ser Asp Asp Ile Glu Leu Gly Ile
                420   425   430
Met Val Glu Ile Pro Ala Thr Ala Ala Leu Ala Asp Val Phe Ala Lys
                435   440   445
Glu Val Asp Phe Phe Ser Ile Gly Thr Asn Asp Leu Ile Gln Tyr Thr
        450   455   460
Leu Ala Ala Asp Arg Met Ser Glu Arg Val Ser Tyr Leu Tyr Gln Pro
465   470   475   480
Tyr Asn Pro Ser Ile Leu Arg Leu Val Lys Gln Val Ile Glu Ala Ser
                485   490   495
His Lys Glu Gly Lys Trp Thr Gly Met Cys Gly Glu Met Ala Gly Asp
                500   505   510
Gln Thr Ala Val Pro Leu Leu Leu Gly Leu Gly Leu Asp Glu Phe Ser
        515   520   525
Met Ser Ala Thr Ser Ile Leu Lys Ala Arg Arg Gln Ile Asn Gly Leu
        530   535   540
Ser Lys Asn Glu Met Ala Glu Leu Ala Asn Arg Ala Val Glu Cys Ser
545   550   555   560
Thr Gln Glu Glu Val Val Asp Leu Val Asn Gln Leu Ala Lys
                565   570

<210> 5475
<211> 684
<212> PRT
<213> S.epidermidis

<400> 5475
Phe Ile Met Ser Lys Val His Leu Ile Glu Ser Pro Tyr Ala Leu Asp
1   5   10   15
Lys Ile Lys Gly Ile Gly Pro Lys Arg Leu Ala Leu Leu Glu Glu Leu
                20   25   30
Asn Ile Lys Ser Val Glu Asp Leu Val Leu Tyr Leu Pro Thr Arg Tyr

```
                35                        40                        45
    Glu Asp Asn Thr Val Ile Asp Leu Asn Gln Ala Asp Asp Gln Ala Thr
        50                        55                        60
    Val Thr Val Gln Gly Glu Val Tyr Ser Ser Pro Thr Val Ala Phe Phe
    65                        70                        75                        80
    Gly Arg Asn Lys Ser Lys Leu Thr Val His Leu Met Ile Asn His Ile
                              85                        90                        95
    Ala Val Lys Cys Val Phe Phe Asn Gln Pro Tyr Leu Lys Lys Lys Leu
                      100                       105                       110
    Glu Leu Asn Ser Ile Val Thr Ile Lys Gly Lys Trp Asn Arg Asn Lys
                  115                       120                       125
    Gln Glu Ile Asn Gly Asn Arg Ile Phe Phe Lys Asp Gln Lys Asn Gln
        130                       135                       140
    Glu Asp Thr His Leu Glu Pro Ile Tyr Arg Ile Lys Glu Gly Ile Lys
    145                       150                       155                       160
    Gln Lys Gln Leu Arg Asp Asn Ile Arg Gln Ala Leu Ser Asp Val Thr
                      165                       170                       175
    Ile His Glu Trp Leu Thr Asp Asp Leu Arg Glu Lys Tyr Lys Leu Glu
                  180                       185                       190
    Thr Leu Ala Tyr Thr Ile Gln Thr Leu His His Pro Ile Asn Lys Gln
                  195                       200                       205
    Asn Leu Leu Arg Ala Arg Arg Thr Tyr Ala Phe Thr Glu Leu Phe Met
        210                       215                       220
    Phe Glu Leu Arg Met Gln Trp Leu Asn Arg Leu Glu Lys Thr Ser Asp
    225                       230                       235                       240
    Glu Ala Ile Glu Ile Asn Tyr Asp Ile Asn Lys Val Lys Gln Phe Ile
                      245                       250                       255
    Asp Ser Leu Pro Phe Glu Leu Thr Asp Ala Gln Lys Val Ser Val Asn
                  260                       265                       270
    Glu Ile Phe Arg Asp Leu Lys Ala Pro Ile Arg Met His Arg Leu Leu
                  275                       280                       285
    Gln Gly Asp Val Gly Ser Gly Lys Thr Val Val Ala Ala Ile Cys Met
        290                       295                       300
    Tyr Ala Leu Lys Thr Ala Gly Tyr Gln Ser Ala Leu Met Val Pro Thr
    305                       310                       315                       320
    Glu Ile Leu Ala Glu Gln His Ala Glu Ser Leu Ile Gln Leu Phe Gly
                      325                       330                       335
    Asn Thr Met Asn Val Ala Leu Leu Thr Gly Ser Val Lys Gly Lys Lys
                  340                       345                       350
    Arg Arg Leu Leu Leu Glu Gln Leu Glu Asn Gly Thr Ile Asp Cys Leu
                  355                       360                       365
    Ile Gly Thr His Ala Leu Ile Gln Asp Asp Val Val Phe Asn Asn Val
        370                       375                       380
    Gly Leu Val Ile Thr Asp Glu Gln His Arg Phe Gly Ile Asn Gln Arg
    385                       390                       395                       400
    Gln Ile Leu Arg Glu Lys Gly Ala Met Thr Asn Val Leu Phe Met Thr
                      405                       410                       415
    Ala Thr Pro Ile Pro Arg Thr Leu Ala Ile Ser Val Phe Gly Glu Met
                      420                       425                       430
    Asp Val Ser Ser Ile Lys Gln Leu Pro Lys Gly Arg Lys Pro Ile Lys
                  435                       440                       445
    Thr Ser Trp Ala Lys His Glu Gln Tyr Asp Gln Val Leu Ala Gln Met
        450                       455                       460
    Ser Asn Glu Leu Lys Lys Gly Arg Gln Ala Tyr Val Ile Cys Pro Leu
    465                       470                       475                       480
    Ile Glu Ser Ser Glu His Leu Glu Asp Val Gln Asn Val Val Ala Leu
```

```
                    485                    490                    495
Tyr Glu Ser Leu Gln Ser Asp Tyr Gly Asn Glu Lys Val Gly Leu Leu
            500                    505                    510
His Gly Lys Met Ser Ala Glu Asp Lys Asp Gln Val Met Gln Lys Phe
            515                    520                    525
Ser Glu His Glu Ile Asp Ile Leu Val Ser Thr Thr Val Val Glu Val
            530                    535                    540
Gly Val Asn Val Pro Asn Ala Thr Phe Met Met Ile Tyr Asp Ala Asp
545                    550                    555                    560
Arg Phe Gly Leu Ser Thr Leu His Gln Leu Arg Gly Arg Val Gly Arg
                    565                    570                    575
Ser Glu His Gln Ser Tyr Cys Val Leu Ile Ala Ser Pro Lys Thr Glu
            580                    585                    590
Thr Gly Ile Glu Arg Met Thr Ile Met Thr Gln Thr Thr Asp Gly Phe
            595                    600                    605
Glu Leu Ser Glu Arg Asp Leu Glu Met Arg Gly Pro Gly Asp Phe Phe
            610                    615                    620
Gly Val Lys Gln Ser Gly Leu Pro Asp Phe Leu Val Ala Asn Val Val
625                    630                    635                    640
Glu Asp Tyr Arg Met Leu Glu Val Ala Arg Asp Glu Ala Ala Glu Leu
                    645                    650                    655
Ile Gln Ser Gly Gln Phe Phe Glu Gln Gln Tyr Ser His Leu Arg Glu
                    660                    665                    670
Phe Ile Lys Gln Asn Leu Arg His Ile Arg Phe Asp
            675                    680
```

<210> 5476
<211> 350
<212> PRT
<213> S.epidermidis

<400> 5476
```
Ile Tyr Leu Phe Phe Ile Asp Ser Phe Pro Pro Tyr Tyr Val Lys Ser
1               5                    10                    15
Leu Arg Leu Lys Ser Leu Arg Leu Phe Leu Phe Arg Tyr Arg Asn Asn
            20                    25                    30
Pro Ile Pro Cys Tyr Ala Leu Ile Ile Met Lys Tyr Gly Asp Asp Asp
            35                    40                    45
Met Ser Ile Pro Ile Ile Ile Asp Thr Asp Pro Gly Ile Asp Asp Ala
            50                    55                    60
Thr Ala Ile Ser Ile Ala Leu Ser His Pro Gln Phe Asp Val Lys Met
65                    70                    75                    80
Ile Ser Thr Val Asn Gly Asn Val Gly Ile Glu Lys Thr Thr Ala Asn
                    85                    90                    95
Ala Leu Lys Leu Lys Arg Phe Phe Asn Ser Ser Val Pro Val His Arg
            100                    105                    110
Gly Ala Ser Gln Pro Leu Ile Asn Asp Ile Phe Glu Ala Thr Ser Ile
            115                    120                    125
His Gly Glu Ser Gly Met Asp Gly Tyr Glu Phe Pro Gln Ile Asn Gln
            130                    135                    140
Asp Asp Leu Thr Ser Ile His Ala Val Glu Ala Met Arg Asn Leu Leu
145                    150                    155                    160
Val Asn Thr Gln Glu Pro Leu Thr Leu Ile Ala Ile Gly Pro Leu Thr
                    165                    170                    175
Asn Ile Ala Ile Leu Leu Thr Ser Tyr Pro Glu Val Gln Pro Phe Ile
            180                    185                    190
```

```
Lys Glu Ile Val Leu Met Gly Gly Ser Thr Gly Arg Gly Asn Val Thr
        195                 200                 205
Pro Leu Ala Glu Phe Asn Ile Tyr Cys Asp Pro Glu Ala Ala Gln Ile
        210                 215                 220
Val Phe Asn Ser Gly Leu Pro Leu Thr Met Ile Gly Leu Asp Leu Ala
225                 230                 235                 240
Arg Glu Ala Leu Phe Thr His His Phe Val Lys Asp Phe Lys Asp Thr
        245                 250                 255
Asn Ala Thr Ser Asn Met Leu Tyr Asn Leu Phe Gln His Tyr Lys Ser
        260                 265                 270
Glu Asp Phe Glu Ile Gly Phe Lys Leu Tyr Asp Val Phe Thr Ile Leu
        275                 280                 285
Tyr Leu Leu Asp Pro Glu Ala Phe Asn Val Lys Glu Ala Tyr Thr Gln
        290                 295                 300
Ile Glu Leu Asn Gly Asn Phe Thr Arg Gly Ala Thr Val Val Asp Phe
305                 310                 315                 320
Asn Met Glu His Pro Asn Cys Thr Val Val Leu Ser Pro Val Glu Arg
        325                 330                 335
Gln Tyr Glu Asp Leu Phe Leu Asn Ala Leu Ser Tyr Cys Lys
        340                 345                 350
```

<210> 5477
<211> 234
<212> PRT
<213> S.epidermidis

<400> 5477

```
Val Ser Leu Leu Tyr Glu Gly Lys Ala Lys Arg Val Phe Thr Thr Asn
1               5                   10                  15
Ile Asp Gly Gln Leu Arg Val Glu Tyr Lys Asp Glu Val Thr Ala Gly
        20                  25                  30
Asn Gly Ala Lys Lys Asp Thr Met Ile Gly Lys Gly Lys Leu Asn Asn
        35                  40                  45
Gln Ile Thr Ser Ile Ile Phe Asp Tyr Leu Thr His Asn His Ile Asp
        50                  55                  60
Asn His Phe Ile Lys Gln Leu Ser Gln Thr Glu Gln Leu Val Gln Gln
65                  70                  75                  80
Val Asp Ile Ile Pro Leu Glu Val Val Val Arg Asn Ile Ala Thr Gly
                85                  90                  95
Ser Ile Thr Lys Arg Leu Gly Phe Lys Lys Gly His Thr Phe Glu Glu
        100                 105                 110
Pro Leu Val Glu Phe Phe Tyr Lys Lys Asp Glu Leu Asn Asp Pro Leu
        115                 120                 125
Ile Thr Asp Asp His Val Lys Leu Leu Gly Ile Ala Asn Asp Glu Glu
        130                 135                 140
Ile Lys Gln Leu Lys Gln Met Ala Lys Asp Ile Asn Gln Val Leu Ile
145                 150                 155                 160
Gln Leu Met Asn Glu Met Ser Leu Arg Leu Val Asp Phe Lys Val Glu
                165                 170                 175
Phe Gly Lys Thr Asn Gly Gly Lys Ile Leu Leu Ala Asp Glu Ile Ser
        180                 185                 190
Pro Asp Thr Cys Arg Ile Trp Asp Lys Asn Thr Asp Thr Asn Phe Asp
        195                 200                 205
Lys Asp Val Tyr Arg Asn Asn Thr Gly Ser Leu Ile Glu Thr Tyr Gln
        210                 215                 220
Thr Phe Leu Asn Lys Leu Glu Asp Leu Lys
```

225   230

<210> 5478
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5478
Ser Gln Leu Phe Leu Arg Tyr Phe Phe Phe Thr Leu Asn Pro Thr Pro
1   5   10   15
Asn Val Ala Met Arg Ser Ile Asn Val Lys Ile Ile Asn Gly Thr Leu
            20   25   30
Ala Thr Pro Asn Ala Lys Leu Asn Lys Val Lys Lys Met Thr Ala Asn
        35   40   45
Ile Glu Lys Ile Gln Lys Ile Pro Leu Asp Phe Phe Cys Cys Ile Pro
    50   55   60
Tyr Pro Thr Phe Tyr Leu Ser Phe Gln
65   70

<210> 5479
<211> 68
<212> PRT
<213> S.epidermidis

<400> 5479
Asn Met Ser Pro Ser Ser Lys Val Tyr Asn Ser Ile Val Ser Glu Tyr
1   5   10   15
Ile Ser Phe Ser Lys Ser Ile Met Met Tyr Ser Leu Lys Leu Ile Tyr
            20   25   30
Pro Leu Lys Ile Asn Gln Ile Cys Ile Ser Phe Ile Ser Ala Ile Leu
        35   40   45
Ile Leu Lys Arg Met Ile Ile Val Leu Lys Thr Glu Lys Ile Phe Asn
    50   55   60
Asn Tyr Phe Ile
65

<210> 5480
<211> 249
<212> PRT
<213> S.epidermidis

<400> 5480
Arg His Met Leu Asn Ala Gln Phe Phe Thr Asp Thr Gly Gln His Arg
1   5   10   15
Glu Lys Asn Glu Asp Ala Gly Gly Ile Phe Tyr Asn Gln Thr Gln Gln
            20   25   30
Gln Met Leu Val Leu Cys Asp Gly Met Gly Gly His Gln Ala Gly Glu
        35   40   45
Ile Ala Ser Gln Phe Val Thr Tyr Glu Leu Gln Lys Arg Phe Glu Glu
    50   55   60
Glu Asn Leu Ile Glu Ile Asn Arg Ala Glu Ser Trp Leu Arg Ser Asn
65   70   75   80
Ile Lys Glu Ile Asn Phe Gln Leu Tyr Asn Tyr Ala Gln Glu Asn Glu
                85   90   95
Asp Tyr Arg Gly Met Gly Thr Thr Leu Val Cys Ala Ile Ile Tyr Asp
            100   105   110

```
Lys Gln Val Val Val Ala Asn Val Gly Asp Ser Arg Ala Tyr Val Ile
        115                 120                 125
Asn Gln Arg Gln Met Asp Gln Ile Thr Ser Asp His Ser Phe Val Asn
    130                 135                 140
His Leu Val Met Thr Gly Gln Ile Thr Lys Asp Glu Ala Phe His His
145                 150                 155                 160
Pro Gln Arg Asn Ile Ile Thr Lys Val Met Gly Thr Asp Lys Arg Val
                165                 170                 175
Ser Pro Asp Leu Phe Ile Lys Arg Thr His Phe Tyr Asp Tyr Leu Leu
                180                 185                 190
Leu Asn Ser Asp Gly Leu Thr Asp Tyr Val Arg Asp Tyr Glu Ile Gln
    195                 200                 205
Glu Leu Leu Ser Ser Asn Asn Ser Leu Asp Val His Gly Asn Glu Leu
    210                 215                 220
Leu Asp Leu Ala Leu Ala His Asp Ser Lys Asp Asn Val Ser Phe Ile
225                 230                 235                 240
Leu Leu Lys Leu Glu Gly Asp Lys Val
                245
```

```
<210> 5481
<211> 179
<212> PRT
<213> S.epidermidis

<400> 5481
Asp Ile Met Leu Ser Val Ala Leu Asp Asp Ile Lys Lys Asn Gly Gly
1               5                   10                  15
Thr Ser Leu Lys Lys Lys Tyr Tyr Ile Ser Ile Ser Leu Leu Met Thr
            20                  25                  30
Ile Ile Val Leu Val Phe Asp Gln Val Ser Lys Trp Leu Ile Thr Ile
        35                  40                  45
Ser Met Lys Val Gly Asp Ser Tyr Glu Ile Ile Pro Asn Phe Leu Asn
    50                  55                  60
Ile Thr Ser His Arg Asn Asn Gly Ala Ala Trp Gly Ile Leu Ser Gly
65                  70                  75                  80
Lys Met Leu Phe Phe Tyr Ile Ile Thr Ile Ile Ile Leu Ile Val Leu
                85                  90                  95
Val Ile Phe Tyr Ile Lys Glu Ala Gln Phe Asn Leu Phe Met Gln Val
            100                 105                 110
Ala Ile Ser Leu Leu Phe Ala Gly Ala Leu Gly Asn Phe Ile Asp Arg
    115                 120                 125
Val Leu His Gly Glu Val Val Asp Phe Ile Asp Thr Asn Ile Phe Gly
    130                 135                 140
Tyr Asp Phe Pro Ile Phe Asn Ile Ala Asp Ser Ser Leu Thr Ile Gly
145                 150                 155                 160
Val Ile Phe Val Ile Ile Ala Leu Ile Lys Asp Ala Ile Ile Asn Lys
                165                 170                 175
Lys Glu Val
```

```
<210> 5482
<211> 802
<212> PRT
<213> S.epidermidis

<400> 5482
```

```
Thr Ile Met Leu Ile Ser Asn Glu Trp Leu Lys Asp Tyr Val Asn Val
1               5                   10                  15
Asp Gln Ser Val Gln Ala Leu Ala Glu Arg Ile Thr Arg Thr Gly Ile
            20                  25                  30
Glu Val Asp Asp Ile Ile Asp Tyr Thr Lys Asp Ile Lys Lys Leu Val
        35                  40                  45
Val Gly His Val Leu Ser Lys Thr Pro His Pro Asp Ala Asp Lys Leu
    50                  55                  60
Asn Ile Cys Gln Val Asp Leu Gly Glu Glu Glu Pro Val Gln Ile Val
65                  70                  75                  80
Cys Gly Ala Pro Asn Val Asp Glu Gly Gln His Val Ile Val Ala Lys
                85                  90                  95
Val Gly Gly Arg Leu Pro Gly Gly Ile Lys Ile Lys Arg Ala Lys Leu
            100                 105                 110
Arg Gly Glu Arg Ser Glu Gly Met Ile Cys Ser Leu Gln Glu Ile Gly
        115                 120                 125
Ile Ser Ser His Val Thr Pro Lys Asn Tyr Glu Ser Gly Ile Tyr Val
    130                 135                 140
Phe Pro Glu Ala Val Lys Pro Gly Thr Asp Ala Leu Glu Ala Ile Tyr
145                 150                 155                 160
Leu Asn Asp Gln Val Met Glu Phe Asp Leu Thr Pro Asn Arg Ala Asp
                165                 170                 175
Ala Leu Ser Met Val Gly Thr Ala Tyr Glu Val Ala Ala Leu Tyr Gln
                180                 185                 190
Thr Lys Met Asn Lys Pro Gln Leu Thr Ser Asn Glu Ser Gln Glu Ser
            195                 200                 205
Ala Lys Asp Glu Leu Thr Ile Glu Val Lys Asn Glu Asp Lys Val Pro
    210                 215                 220
Tyr Tyr Ser Thr Arg Val Val His Asp Val Thr Ile Gly Pro Ser Pro
225                 230                 235                 240
Val Trp Met Gln Phe Arg Leu Ile Lys Ala Gly Ile Arg Pro Ile Asn
                245                 250                 255
Asn Val Val Asp Ile Ser Asn Tyr Val Leu Leu Glu Tyr Gly Gln Pro
            260                 265                 270
Leu His Met Phe Asp Gln Glu Gln Ile Gly Ser Gln Ser Ile Glu Val
        275                 280                 285
Arg Gln Ala Lys Lys Asp Glu Thr Met Arg Thr Leu Asp Gly Glu Glu
    290                 295                 300
Arg Arg Leu Leu Asp Thr Asp Ile Val Ile Thr Asn Gly Lys Asp Pro
305                 310                 315                 320
Ile Ala Leu Gly Gly Val Met Gly Gly Asp Phe Ser Glu Val Thr Glu
                325                 330                 335
Gln Thr Arg His Val Val Val Glu Gly Ala Ile Phe Asp Pro Val Ser
            340                 345                 350
Ile Arg His Thr Ser Arg Arg Leu Asn Leu Arg Ser Glu Ser Ser Ser
            355                 360                 365
Arg Phe Glu Lys Gly Ile Ala Thr Glu Phe Val Asp Glu Ala Val Asp
    370                 375                 380
Arg Ala Cys Tyr Leu Leu Glu Arg Tyr Ala Ser Gly Thr Val Leu Lys
385                 390                 395                 400
Asp Arg Val Ser His Gly Asp Leu Gly Ser Phe Val Thr Pro Ile Glu
                405                 410                 415
Ile Thr Ala Asp Lys Val Asn Arg Thr Ile Gly Phe Asn Leu Thr Asp
            420                 425                 430
Glu Glu Ile Ile Asp Ile Phe Glu Gln Leu Gly Phe Asp Thr Glu Asn
            435                 440                 445
```

```
Lys Asn Gly Glu Ile Thr Val Asn Val Pro Ser Arg Arg Lys Asp Ile
    450                 455                 460
Ser Ile Lys Glu Asp Leu Ile Glu Glu Val Ala Arg Ile Tyr Gly Tyr
465                 470                 475                 480
Asp Glu Ile Pro Ser Thr Leu Pro Val Phe Lys Asp Val Thr Ser Gly
                485                 490                 495
Glu Leu Thr Asp Arg Gln Phe Lys Thr Arg Thr Val Lys Glu Thr Leu
                500                 505                 510
Glu Gly Ala Gly Leu Asp Gln Ala Ile Thr Tyr Ser Leu Val Ser Lys
                515                 520                 525
Asn His Ala Thr Asp Phe Ala Leu Gln Asn Arg Pro Thr Ile Glu Leu
    530                 535                 540
Leu Met Pro Met Ser Glu Ala His Ser Thr Leu Arg Gln Ser Leu Leu
545                 550                 555                 560
Pro His Leu Ile Asp Ala Val Ser Tyr Asn Val Ala Arg Lys Asn Thr
                565                 570                 575
Asn Val Lys Leu Tyr Glu Ile Gly Arg Val Phe Phe Gly Asn Gly Glu
                580                 585                 590
Gly Glu Leu Pro Asp Glu Val Glu Tyr Leu Ser Gly Ile Leu Thr Gly
                595                 600                 605
Asp Phe Val Asn Asn Thr Trp Gln Gly Lys Lys Glu Ser Val Asp Phe
 ·  610                 615                 620
Tyr Leu Thr Lys Gly Val Val Glu Arg Ile Ala Glu Lys Leu Asn Leu
625                 630                 635                 640
Gln Phe Asp Phe Arg Ala Gly Gln Ile Asp Gly Leu His Pro Gly Arg
                645                 650                 655
Thr Ala Ile Val Ser Leu Asn Gly Lys Asp Ile Gly Phe Ile Gly Glu
                660                 665                 670
Leu His Pro Thr Leu Ala Ala Asn Asn Asp Leu Lys Arg Thr Tyr Val
                675                 680                 685
Phe Glu Leu Asn Tyr Asp Ala Met Met Glu Val Ser Val Gly Tyr Ile
    690                 695                 700
Asn Tyr Glu Pro Ile Pro Arg Phe Pro Gly Val Thr Arg Asp Ile Ala
705                 710                 715                 720
Leu Glu Val Asn His Glu Val Thr Ser Ser Glu Leu Leu Ser Ile Ile
                725                 730                 735
His Glu Asn Gly Glu Asp Ile Leu Asn Asp Thr Leu Val Phe Asp Val
                740                 745                 750
Tyr Glu Gly Glu His Leu Glu Lys Gly Lys Lys Ser Ile Ala Ile Arg
                755                 760                 765
Leu Ser Tyr Leu Asp Thr Glu Asn Thr Leu Thr Asp Glu Arg Val Asn
    770                 775                 780
Ala Val His Asp Lys Ile Leu Glu Ala Leu Lys Lys His Gly Ala Ile
785                 790                 795                 800
Ile Arg


<210> 5483
<211> 79
<212> PRT
<213> S.epidermidis

<400> 5483
Lys Asn Val Thr Gly Gly Gln Lys Ile Met Leu Asn Pro Pro Leu Asn
1               5                   10                  15
Gln Leu Thr Ala Lys Val Asn Ser Lys Tyr Leu Ile Ala Thr Thr Ala
```

```
            20                    25                    30
Ala Lys Arg Ala Arg Glu Leu Asp Glu Lys Arg Glu Thr Ala Leu Leu
        35                    40                    45
Asp Gln Tyr His Ser Ala Lys Pro Val Gly Lys Ala Leu Glu Glu Ile
    50                    55                    60
Ala Asp Gly Lys Ile Glu Pro Val Val Pro Lys Glu Tyr Leu Gly
65                    70                    75
```

<210> 5484
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5484
```
Tyr Lys Ser Thr Leu Leu Phe Asn Leu Phe Tyr Phe Thr Val Asp Ile
1               5.                  10                    15
Tyr Val Lys Phe Ser Arg Ile Phe Ile Tyr Pro Lys Glu Ile Thr Gln
            20                    25                    30
Gln Phe Tyr Asp Tyr Phe Phe Glu Arg Phe Ala Ser
        35                    40
```

<210> 5485
<211> 187
<212> PRT
<213> S.epidermidis

<400> 5485
```
Arg Tyr Glu Phe Phe Tyr Ile Lys Arg Gly Glu Thr Met Ser Glu Arg
1               5                    10                    15
Ile Ile Leu Asp Glu Ala Ala Ile Gln Arg Thr Ile Thr Arg Ile Ala
            20                    25                    30
His Glu Ile Leu Glu Tyr Asn Lys Gly Thr Lys Asp Leu Val Leu Leu
        35                    40                    45
Gly Ile Lys Thr Arg Gly Ala Phe Leu Ala His Arg Ile Gln Asp Lys
    50                    55                    60
Ile Asn Ser Ile Glu Gln Gln Leu Val Pro Thr Gly Thr Ile Asp Ile
65                    70                    75                    80
Thr His Phe Arg Asp Asp Val Asp Lys Val Val Gln Gln Ala Asp Gln
                85                    90                    95
Tyr Ala Phe Asp Ile Asn Val Asp Ile Asn Asn Lys Val Val Val Ile
            100                   105                   110
Ile Asp Asp Val Leu Tyr Thr Gly Arg Thr Val Arg Ala Ser Leu Asp
        115                   120                   125
Ala Ile Leu Leu His Thr Arg Pro Ile Lys Ile Gly Leu Ala Ala Leu
    130                   135                   140
Val Asp Arg Gly His Arg Glu Leu Pro Ile Arg Ala Asp Phe Val Gly
145                   150                   155                   160
Lys Asn Ile Pro Thr Ala Arg Asp Glu Ser Val Ser Val Tyr Leu Glu
                165                   170                   175
Glu Ile Asp Asp Arg Asn Ala Val Val Ile Glu
            180                   185
```

<210> 5486
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5486
Leu Leu Ala Thr Gly Pro Phe Ala Leu Lys Thr Ser Ile Phe Glu Gln
1   5   10   15
Pro Leu Ser Lys Ile Ser Val Pro Asn Asn Arg Ser Lys Asp Leu Asn
            20   25   30
Phe Asp Thr Phe Phe Asp Leu Leu Ile Leu Gln Met
            35   40

<210> 5487
<211> 77
<212> PRT
<213> S.epidermidis

<400> 5487
Glu Asp Asn Thr Thr Met Ala Val Phe Lys Val Phe Tyr Gln His Asn
1   5   10   15
Lys Asp Glu Val Ile Val Arg Glu Asn Thr Gln Thr Ile Tyr Val Glu
            20   25   30
Gly Gln Thr Glu Glu Gln Val Arg Arg Tyr Leu Lys Asp Arg Asn Phe
            35   40   45
Asn Ile Glu Phe Ile Thr Lys Leu Glu Gly Ala His Leu Glu Tyr Glu
        50   55   60
Lys Glu His Ser Thr His Phe Asn Val Glu Asn Ala Glu
65   70   75

<210> 5488
<211> 97
<212> PRT
<213> S.epidermidis

<400> 5488
Arg Met Asn Thr Ile Val Lys His Thr Val Gly Phe Ile Ala Ser Ile
1   5   10   15
Val Leu Thr Leu Leu Ala Val Phe Val Thr Leu Tyr Thr Asn Met Thr
            20   25   30
Phe His Ala Lys Val Thr Ile Ile Phe Gly Phe Ala Phe Ile Gln Ala
        35   40   45
Ala Leu Gln Leu Leu Met Phe Met His Leu Thr Glu Gly Lys Asp Gly
        50   55   60
Arg Leu Gln Ser Phe Lys Val Ile Phe Ala Ile Ile Ile Thr Leu Val
65   70   75   80
Thr Val Ile Gly Thr Tyr Trp Val Met Gln Gly Gly His Ser Ser His
                85   90   95
Leu

<210> 5489
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5489
Ser Val Cys Thr Pro Thr Leu Leu Leu Gly Thr Met Val Met Ile Pro
1   5   10   15
Phe Thr His Asp His Phe Lys Ile Asp Lys Phe Lys Val Ile Glu Phe

```
                20                    25                        30
Gln Tyr Asn Phe Tyr His Leu Gly
        35                    40
```

<210> 5490
<211> 79
<212> PRT
<213> S.epidermidis

<400> 5490
```
Thr Lys Leu Thr Arg Cys Leu Met Tyr Lys Asp Tyr Asn Met Thr Gln
1               5                   10                  15
Leu Thr Leu Pro Met Glu Thr Ser Val Leu Ile Pro Thr Asn Asp Ile
            20                  25                  30
Ser Arg His Val Asn Asp Ile Val Glu Thr Ile Leu Glu Thr Glu Phe
        35                  40                  45
Arg His His Arg Asp Ala Ile Ser Tyr His Pro Lys Ile Met Leu Lys
      50                  55                  60
Val Val Leu Tyr Ala Tyr Thr Gln Ser Val Phe Ser Gly Arg Arg
65                  70                  75
```

<210> 5491
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5491
```
Thr Glu Pro Thr Leu Val Met Ile Asn Ser Thr Ser Val Gly Ser Thr
1               5                   10                  15
Tyr Thr Ser Ser Ile Val Phe Ile Ser Ser Ile His Ser Thr Met Arg
            20                  25                  30
Ile Ile Ser Asp Lys Ser Leu Met Ile
        35                  40
```

<210> 5492
<211> 634
<212> PRT
<213> S.epidermidis

<400> 5492
```
Tyr Asn Lys Thr Val Ala Ile Lys Ser Gly Ser Ile His Lys Lys Gly
1               5                   10                  15
Ile Tyr Lys Met Thr Asn Leu Arg Glu Asp Val Arg Asn Ile Ala Ile
            20                  25                  30
Ile Ala His Val Asp His Gly Lys Thr Thr Leu Val Asp Gln Leu Leu
        35                  40                  45
Lys Gln Ser Gly Ile Phe Arg Glu Asn Glu His Val Asp Glu Arg Ala
      50                  55                  60
Met Asp Ser Asn Asp Leu Glu Arg Glu Arg Gly Ile Thr Ile Leu Ala
65                  70                  75                  80
Lys Asn Thr Ala Ile Asp Tyr Lys Gly Thr Arg Ile Asn Ile Leu Asp
                85                  90                  95
Thr Pro Gly His Ala Asp Phe Gly Gly Glu Val Glu Arg Ile Met Lys
            100                 105                 110
Met Val Asp Gly Val Val Leu Val Val Asp Ala Tyr Glu Gly Thr Met
        115                 120                 125
```

Pro Gln Thr Arg Phe Val Leu Lys Lys Ala Leu Glu Gln Asn Leu Lys
    130   135   140
Pro Val Val Val Val Asn Lys Ile Asp Lys Pro Ala Ala Arg Pro Glu
145   150   155   160
Gly Val Val Asp Glu Val Leu Asp Leu Phe Ile Glu Leu Glu Ala Asn
                165   170   175
Asp Glu Gln Leu Asp Phe Pro Val Val Tyr Ala Ser Ala Val Asn Gly
                180   185   190
Thr Ala Ser Leu Asp Ser Glu Lys Gln Asp Glu Asn Met Gln Ser Leu
            195   200   205
Tyr Glu Thr Ile Ile Asp Tyr Val Pro Ala Pro Val Asp Asn Ser Asp
    210   215   220
Glu Pro Leu Gln Phe Gln Ile Ala Leu Leu Asp Tyr Asn Asp Tyr Val
225   230   235   240
Gly Arg Ile Gly Val Gly Arg Val Phe Arg Gly Lys Met Arg Val Gly
                245   250   255
Asp Asn Val Ser Leu Ile Lys Leu Asp Gly Thr Val Lys Asn Phe Arg
                260   265   270
Val Thr Lys Ile Phe Gly Tyr Phe Gly Leu Lys Arg Glu Glu Ile Glu
            275   280   285
Glu Ala Gln Ala Gly Asp Leu Ile Ala Val Ser Gly Met Glu Asp Ile
    290   295   300
Asn Val Gly Glu Thr Val Thr Pro His Asp His Arg Asp Pro Leu Pro
305   310   315   320
Val Leu Arg Ile Asp Glu Pro Thr Leu Glu Met Thr Phe Lys Val Asn
                325   330   335
Asn Ser Pro Phe Ala Gly Arg Glu Gly Asp Tyr Val Thr Ala Arg Gln
                340   345   350
Ile Gln Glu Arg Leu Asp Gln Gln Leu Glu Thr Asp Val Ser Leu Lys
            355   360   365
Val Thr Pro Thr Asp Gln Pro Asp Ser Trp Val Val Ala Gly Arg Gly
    370   375   380
Glu Leu His Leu Ser Ile Leu Ile Glu Asn Met Arg Arg Glu Gly Phe
385   390   395   400
Glu Leu Gln Val Ser Lys Pro Gln Val Ile Leu Arg Glu Ile Asp Gly
                405   410   415
Val Leu Ser Glu Pro Phe Glu Arg Val Gln Cys Glu Val Pro Ser Glu
            420   425   430
Asn Ala Gly Ala Val Ile Glu Ser Leu Gly Ala Arg Lys Gly Glu Met
            435   440   445
Leu Asp Met Met Thr Thr Asp Asn Gly Leu Thr Arg Leu Ile Phe Met
    450   455   460
Val Pro Ala Arg Gly Met Ile Gly Tyr Thr Thr Glu Phe Met Ser Met
465   470   475   480
Thr Arg Gly Tyr Gly Ile Ile Asn His Thr Phe Glu Glu Phe Arg Pro
                485   490   495
Arg Val Lys Ala Gln Ile Gly Gly Arg Arg Asn Gly Ala Leu Ile Ser
            500   505   510
Met Asp Gln Gly Gln Ala Thr Ser Tyr Ala Ile Ile Asn Leu Glu Asp
    515   520   525
Arg Gly Val Asn Phe Met Glu Pro Gly Thr Glu Val Tyr Glu Gly Met
    530   535   540
Ile Val Gly Glu His Asn Arg Glu Asn Asp Leu Thr Val Asn Ile Thr
545   550   555   560
Lys Ala Lys His Gln Thr Asn Val Arg Ser Ala Thr Lys Asp Gln Thr
                565   570   575

```
Gln Thr Met Asn Arg Pro Arg Ile Leu Thr Leu Glu Glu Ala Leu Gln
        580                     585                     590
Phe Ile Asn Asp Asp Glu Leu Val Glu Val Thr Pro Glu Ser Ile Arg
        595                     600                     605
Leu Arg Lys Lys Ile Leu Asn Lys Ser Ala Arg Glu Lys Glu Ala Lys
    610                     615                     620
Arg Val Lys Gln Leu Met Gln Asp Glu Gln
625                     630
```

<210> 5493
<211> 62
<212> PRT
<213> S.epidermidis

<400> 5493
```
Arg Ile Lys Thr Tyr Pro Ile Val Leu Glu Leu Leu Thr His Leu Gly
1                   5                   10                  15
Val Leu Ile Met Lys Leu Phe Asn Ala Phe Lys Asp Ile Leu Glu Ala
            20                  25                  30
Ala Ile Thr Asn Asp Gly Thr Gln Leu Gly Ala Ser Ile Val Asn Ile
        35                  40                  45
Ile Glu Ser Ser Val Asp Met Val Asn Arg Phe Leu Gly Asn
    50                  55                  60
```

<210> 5494
<211> 87
<212> PRT
<213> S.epidermidis

<400> 5494
```
Ile Met Lys Thr Ile Glu Leu His Ile Thr Leu Gln Pro Gln Val Leu
1                   5                   10                  15
Asp Thr Gln Gly Gln Ala Leu Asn Arg Ala Val His Asp Leu Gly Tyr
            20                  25                  30
Glu Gln Val Asn Asp Ile Arg Val Gly Lys Val Leu Tyr Met Thr Val
        35                  40                  45
Asn Glu Pro Thr Asp Glu Ala Val Asp Asn Ile Ile Thr Thr Leu Ser
    50                  55                  60
Glu Lys Leu Phe Ala Asn Thr Val Ile Glu Glu Tyr Ser Tyr Lys Val
65                  70                  75                  80
Ile Asp Glu Lys Glu Lys Ala
                85
```

<210> 5495
<211> 155
<212> PRT
<213> S.epidermidis

<400> 5495
```
Asn Lys Glu Thr Lys Gly Asp Asn Val Met Gly Glu Val Lys His Leu
1                   5                   10                  15
Gln Ile Asn Tyr Lys Thr Asp Glu Leu Phe Ala Asp Phe Arg Glu Phe
            20                  25                  30
Gly Asn Lys Asn Leu Tyr Met Ile Glu Glu Leu Lys Gly Gln Met Ile
        35                  40                  45
Asp Ala Ser Ser Asp Ser Pro Phe Tyr Gly Ile Phe Val Gly Asn Lys
```

```
        50                      55                      60
Leu Val Ala Arg Met Ala Leu Leu Asp Lys Gly Glu Val Glu Glu Thr
65                      70                      75                      80
Tyr Phe Pro Asn Ser Asn Asp Tyr Ile Leu Leu Trp Lys Leu Glu Val
                    85                      90                      95
Leu Asp Thr Tyr Gln Arg Arg Gly Tyr Ala Lys Gln Leu Leu Asn Phe
                    100                     105                     110
Ala Lys Glu Asn Lys Lys Pro Ile Lys Ala Ile Ala Arg Asn Asn Ser
            115                     120                     125
Lys Glu Phe Phe Leu Lys Gln Gly Phe Lys Asp Val Glu Thr Lys Asn
        130                     135                     140
Pro Glu Gly His Asp Ile Leu Ile Trp Asn Pro
145                     150                     155
```

<210> 5496
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5496
```
Lys Lys Leu Thr Ile Glu Met Gln Ser Ser Leu Asn Asn Tyr Pro Phe
1                   5                   10                      15
Lys Thr Val Arg Glu Thr Glu Lys Gly Glu Val Phe Leu Met Asp Lys
            20                      25                      30
Ser Thr Tyr Asp Tyr Lys Lys Ile Met
        35                      40
```

<210> 5497
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5497
```
Ile Phe Met Thr Asn Lys Glu Phe Glu Lys Lys Ser Ala Glu Lys Ala
1                   5                   10                      15
Lys Glu Val Glu Glu Lys Leu Lys Glu Gln Asn Glu Glu Lys Thr Asp
            20                      25                      30
Asp Ile Glu Gln Thr Lys Lys Asp Ile Gln Asp Thr Leu Asp
        35                      40                      45
```

<210> 5498
<211> 80
<212> PRT
<213> S.epidermidis

<400> 5498
```
Ile Ile Tyr Leu Ile Arg Phe Glu Ile Ile Ser Phe Ile Phe Glu Phe
1                   5                   10                      15
Leu Thr Lys Arg Ser Leu Glu Leu Lys Val Leu Lys Leu Val Lys Arg
            20                      25                      30
Asp Asn Phe Tyr Ile Ile Ser Tyr Arg Asn Cys Leu Phe Tyr Asn Phe
            35                      40                      45
Gln Thr Ile Ile Ser Leu Leu Ile Tyr Tyr Leu Thr Tyr Ile Ser Ser
        50                      55                      60
Phe Asn Thr Asn His Ile Pro Ser Ile Thr Ser Gln Leu Phe Leu Val
65                      70                      75                      80
```

<210> 5499
<211> 47
<212> PRT
<213> S.epidermidis

<400> 5499
Leu Phe Lys Ala Gln Ala Pro Pro Ile Ile Ser Val Glu Pro Thr Ser
1   5   10   15
Ile Asn Ser Ile Cys Gly Met Glu Asp Arg Lys Glu Trp Phe Val Ile
            20   25   30
Thr Ile Ala Ser His Ala Pro Ala Lys Ala Gly Ile Lys Leu Pro
        35   40   45

<210> 5500
<211> 65
<212> PRT
<213> S.epidermidis

<400> 5500
Lys Leu Phe Tyr Met Thr Met His His Leu Lys Glu His Ser Ile Asn
1   5   10   15
Lys Leu Lys Gln Tyr Ile Leu Leu Leu Thr Tyr Leu Lys Ser Asp Thr
            20   25   30
Ser Tyr Arg His Ile Ile Gln Leu Asn Ser Phe Tyr Ile Arg Ser Tyr
        35   40   45
Phe Ser Ile Ser Asn Ile Leu Phe Leu Tyr Leu Ile Asp Lys Ile Tyr
    50   55   60
Gln
65

<210> 5501
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5501
Val Val Phe Tyr Thr Tyr Leu Met Lys Cys Phe Phe Lys Ser Asn Ser
1   5   10   15
Asn Val Ile Arg Ile Asn Leu Lys Thr Thr Lys Tyr Met Gln Asn Lys
            20   25   30
Thr Ala Leu Phe Ile Gln Lys His His Val Lys Tyr Asn Leu Thr Glu
        35   40   45
Ile Leu Val Asn
    50

<210> 5502
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5502
Leu Leu Leu Tyr Leu Ser Phe Leu Thr Val Arg His Ala Gln Leu Tyr
1   5   10   15
Cys Ala Arg Phe Tyr Arg Tyr Lys His Met Arg Phe Tyr Ile Lys Leu
            20   25   30

Thr Phe Met Tyr Lys Asn Leu Tyr Tyr Ser Glu Lys Tyr Lys
        35   40   45

<210> 5503
<211> 303
<212> PRT
<213> S.epidermidis

<400> 5503
Ile Lys Leu Tyr Phe Tyr Arg Arg Arg Phe Met Glu His Leu Leu Ser
1   5   10   15
Met Glu His Leu Ser Asn Ser Glu Ile Tyr Asp Leu Ile Thr Ile Ala
            20   25   30
Cys Gln Phe Lys Ser Gly Glu Arg Pro Leu Pro Gln Phe Asn Gly Gln
            35   40   45
Tyr Val Ser Asn Leu Phe Phe Glu Asn Ser Thr Arg Thr Lys Cys Ser
        50   55   60
Phe Glu Met Ala Glu Gln Lys Leu Gly Leu Lys Leu Ile Asn Phe Glu
65   70   75   80
Thr Ser Thr Ser Ser Val Lys Lys Gly Glu Ser Leu Tyr Asp Thr Cys
                85   90   95
Lys Thr Leu Glu Ser Ile Gly Val Asp Leu Leu Val Ile Arg Asp Ser
            100   105   110
Gln Asn Ser Tyr Tyr Glu Glu Leu Asp Gln Leu Asn Ile Pro Ile Ala
            115   120   125
Asn Ala Gly Asp Gly Ser Gly Gln His Pro Thr Gln Ser Leu Leu Asp
        130   135   140
Ile Met Thr Ile Tyr Glu Glu Tyr Gly Ser Phe Glu Gly Leu Asn Ile
145   150   155   160
Leu Ile Cys Gly Asp Ile Lys Asn Ser Arg Val Ala Arg Ser Asn Tyr
                165   170   175
His Ser Leu Thr Ser Leu Gly Ala Asn Val Met Phe Ser Ser Pro Lys
            180   185   190
Glu Trp Val Asp Asn Thr Leu Glu Ala Pro Tyr Val Glu Ile Asp Glu
            195   200   205
Val Ile Asp Lys Val Asp Ile Val Met Leu Leu Arg Val Gln His Glu
        210   215   220
Arg His Gly Ile Ser Gly Glu Ala Asn Phe Ala Ala Glu Glu Tyr His
225   230   235   240
Gln Gln Phe Gly Leu Thr Gln Ala Arg Tyr Asp Lys Leu Lys Glu Glu
                245   250   255
Ala Ile Val Met His Pro Ala Pro Val Asn Arg Gly Val Glu Ile Lys
            260   265   270
Ser Glu Leu Val Glu Ala Pro Lys Ser Arg Ile Phe Lys Gln Met Glu
            275   280   285
Asn Gly Met Tyr Leu Arg Met Ala Val Ile Ser Ala Leu Leu Gln
    290   295   300

<210> 5504
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5504
Ile Phe Ile Tyr Leu Tyr Tyr Val Ser Glu Lys Lys Arg Lys Ile Lys
1   5   10   15

Arg Arg Asn Thr Tyr Ile Phe Phe Ile Thr Ala Leu Lys Lys Ile Asn
            20   25   30
Ile His Phe Gln Gln Ser Asn His Leu Ile Ile
        35   40

<210> 5505
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5505
Ser Leu Ser Tyr Phe Ile Lys Asn Thr Pro Tyr Gln Leu Phe Leu Leu
1   5   10   15
Ile Gly Arg Ile Phe Met Asp Cys Ile Gln His Leu Ile Val Lys His
            20   25   30
Gln Ser Lys Pro Ile Asn Ile Tyr Met Asp Arg Pro Phe Phe Val Cys
        35   40   45

<210> 5506
<211> 248
<212> PRT
<213> S.epidermidis

<400> 5506
Val Lys Ser Tyr Leu Leu Ile Gln Ser Leu Lys Asn Ile Ala Ile Lys
1   5   10   15
Leu Ser Met Lys Arg Arg Lys His Asn Met Lys Phe Ala Val Leu Val
            20   25   30
Phe Pro Gly Ser Asn Cys Asp Arg Asp Met Tyr Asn Ala Ala Ile Lys
        35   40   45
Ser Gly Val Asp Ala Ala Tyr Val Asp Tyr Arg Glu Thr Thr Leu Asp
        50   55   60
Gly Phe Asp Gly Val Leu Ile Pro Gly Gly Phe Ser Phe Gly Asp Tyr
65   70   75   80
Leu Arg Ser Gly Ala Met Ala Ser Val Ala Pro Ile Ile Lys Glu Val
                85   90   95
Lys Arg Phe Ala Lys Glu Gly Lys Pro Val Leu Gly Val Cys Asn Gly
            100   105   110
Phe Gln Ile Leu Thr Glu Ile Gly Leu Leu Pro Gly Ala Leu Leu His
            115   120   125
Asn Asp Ser His Leu Phe Ile Ser Arg Asn Glu Thr Leu Lys Ile Thr
        130   135   140
Asn Asn Gln Thr Pro Phe Thr His Leu Tyr Val Lys Asn Glu Asn Val
145   150   155   160
Val Tyr Pro Val Ala His Gly Glu Gly His Tyr Tyr Cys Thr Asp Glu
                165   170   175
Ile Tyr Arg Glu Leu Asn Asp Asn Asn Gln Ile Ile Leu Lys Tyr Thr
            180   185   190
Asn Asn Pro Asn Gly Ser Tyr Glu Asp Ile Ala Gly Ile Val Asn Lys
        195   200   205
Glu Gly Asn Val Cys Gly Met Met Pro His Pro Glu Arg Ala Leu Glu
        210   215   220
Thr Leu Leu Gly Thr Asn Ser Gly Val Lys Leu Phe Glu Ser Met Val
225   230   235   240
Lys Ser Trp Arg Glu Gln Asn Val
                245

<210> 5507
<211> 631
<212> PRT
<213> S.epidermidis

<400> 5507

```
Ile Asn Ile Tyr Lys Ile Asn Ile Asn Lys Asp Trp Gly Ile Thr Leu
1               5                   10                  15
Ser Asn Cys Ser Ser Phe Ile Leu Phe Ser Leu Ile Asn Leu Ile Met
            20                  25                  30
Glu Arg Arg Ser Pro Leu Glu Glu Tyr Gln Lys Lys Ile Lys Glu Lys
        35      ·               40                  45
Leu Asn Val Val Pro Leu Glu Pro Gly Cys Tyr Leu Met Lys Asp Arg
    50                  55                  60
Asn Asp Gln Val Ile Tyr Val Gly Lys Ala Lys Arg Leu Arg Asn Arg
65                  70                  75                  80
Leu Arg Ser Tyr Phe Thr Gly Ala His Asp Ala Lys Thr Thr Arg Leu
            85                  90                  95
Val Gly Glu Ile Arg Asn Phe Glu Phe Ile Val Thr Ser Ser Glu Thr
            100                 105                 110
Glu Ser Leu Leu Leu Glu Leu Asn Leu Ile Lys Gln Tyr Gln Pro Arg
            115                 120                 125
Tyr Asn Ile Leu Leu Lys Asp Asp Lys Ser Tyr Pro Phe Ile Lys Ile
    130                 135                 140
Thr Lys Glu Lys His Pro Arg Leu Leu Val Thr Arg Thr Val Lys Lys
145                 150                 155                 ·160
Asn Ser Gly Lys Tyr Phe Gly Pro Tyr Pro Asn Ala Tyr Ser Ala Gln
            165                 170                 175
Glu Thr Lys Lys Leu Leu Asp Arg Ile Tyr Pro Phe Arg Lys Cys Asp
            180                 185                 190
Asn Met Pro Asp Lys Leu Cys Leu Tyr Tyr His Ile Gly Gln Cys Met
            195                 200                 205
Gly Pro Cys Val Tyr Asp Val Asp Leu Glu Lys Tyr Ala Gln Met Thr
    210                 215                 220
Lys Glu Ile Thr Asp Phe Leu Asn Gly Glu Asp Lys Thr Ile Leu His
225                 230                 235                 240
His Leu Glu Asp Arg Met Asn Lys Ala Ser Glu Gln Leu Asp Phe Glu
            245                 250                 255
Gln Ala Lys Glu Tyr Arg Asp Met Ile Gln His Ile His Asn Leu Thr
            260                 265                 270
Lys Lys Gln Lys Ile Met Ser Ser Asp Asn Thr Ile Arg Asp Val Phe
    275                 280                 285
Gly Tyr Ser Val Ser Lys Gly Trp Met Cys Val Gln Val Phe Phe Val
    290                 295                 300
Arg Gln Gly Asn Met Ile Lys Arg Asp Ala Thr Met Ile Pro Leu Gln
305                 310                 315                 320
Gln Thr Glu Glu Glu Glu Phe Tyr Thr Phe Ile Gly Gln Phe Tyr Ser
            325                 330                 335
Leu Asn Gln His Leu Leu Pro Lys Glu Val His Val Pro Lys Asn Leu
            340                 345                 350
Asp Lys Asp Ile Ile Gln Ser Val Val Asp Thr Lys Ile Val Gln Pro
    355                 360                 365
Val Arg Gly Ala Lys Lys Asp Met Ile Asn Leu Ala Asn His Asn Ala
    370                 375                 380
Glu Val Gln Leu Asp Asn Lys Phe Glu Leu Ile Ala Arg Asp Glu Ser
```

```
385                     390                     395                     400
Arg Thr Ile Lys Ala Ile Glu Glu Leu Gly Glu Arg Met Gly Ile Gln
                405                     410                     415
Thr Pro Ile Arg Ile Glu Ala Phe Asp Asn Ser Asn Ile Gln Gly Val
                420                     425                     430
Asp Pro Val Ser Ala Met Val Thr Phe Val Asp Gly Lys Pro His Lys
                435                     440                     445
Lys Asp Tyr Arg Lys Tyr Lys Ile Lys Thr Val Glu Gly Pro Asp Asp
                450                     455                     460
Tyr Lys Ser Met Arg Glu Val Val Arg Arg Arg Tyr Thr Arg Val Leu
465                     470                     475                     480
Asn Glu Gly Leu Pro Leu Pro Asp Leu Ile Ile Val Asp Gly Gly Lys
                    485                     490                     495
Gly His Met Asn Gly Val Met Asp Val Leu Glu Asn Glu Leu Gly Leu
                500                     505                     510
Asp Ile Pro Val Ala Gly Leu Gln Lys Asn Asp Lys His Gln Thr Ser
                515                     520                     525
Glu Leu Leu Tyr Gly Ala Ser Ala Glu Ile Val Pro Leu Lys Lys Asn
                530                     535                     540
Ser Gln Ala Phe Tyr Leu Leu His Arg Ile Gln Asp Glu Val His Arg
545                     550                     555                     560
Phe Ala Ile Thr Phe His Arg Gln Thr Arg Gln Lys Thr Gly Leu Lys
                    565                     570                     575
Ser Val Leu Asp Asp Ile Asp Gly Ile Gly Thr Lys Arg Lys Thr Ser
                580                     585                     590
Leu Leu Arg Thr Phe Gly Ser Ile Lys Lys Met Lys Glu Ala Ser Phe
                595                     600                     605
Asp Glu Leu Arg Gln Ala Gly Leu Pro Glu Lys Val Ala Lys Asn Leu
        610                     615                     620
Gln Asn Ala Leu Gln Asn Lys
625                     630
```

```
<210> 5508
<211> 46
<212> PRT
<213> S.epidermidis
```

```
<400> 5508
Cys Phe Leu Tyr Met Asn Leu Lys Leu Met Cys Ser Ser Phe His Leu
1               5                   10                  15
Ile His Arg Tyr Leu Val Phe Leu Ile His Glu Pro Gln Ala His Val
            20                  25                  30
Phe Val Cys Ser Phe Ser Asn Ile Thr Tyr Thr Phe His Arg
            35                  40                  45
```

```
<210> 5509
<211> 43
<212> PRT
<213> S.epidermidis
```

```
<400> 5509
Ser Phe Lys Tyr Asn Asn Glu Phe Ser Ser Asn Ser Gln Tyr Leu Leu
1               5                   10                  15
Ile Glu His Leu Thr Leu Asn Ser Val Ser Val Asn Val Phe Lys Gln
            20                  25                  30
Phe Thr Ile Tyr Ile Ile Phe Ile Lys Val Ser
```

```
<210> 5510
<211> 541
<212> PRT
<213> S.epidermidis

<400> 5510
Arg Ser Lys Tyr Met Lys Cys Asn Thr Leu Lys Leu Thr Glu Gln Asp
1               5                   10                  15
Gln Phe Ile Asn Lys Ile Lys Asn Ser Glu Ser Gln Ile Thr Ser Phe
            20                  25                  30
Tyr Glu Tyr Asp Ala Ala Lys Lys Glu Ser Phe Tyr Arg Arg Leu Lys
            35                  40                  45
Thr Pro Asn Asn Gly Arg Glu Phe His Leu Ser Arg Val Ile Lys Ser
            50                  55                  60
Tyr Met Asn Glu Leu Lys Leu Thr His Gln Gln Leu Asn Asn Ile Asp
65                  70                  75                  80
Ala Leu Ala Asp Gly Ala Lys Val Val Ile Gly Gly Gln Gln Ala Gly
                85                  90                  95
Leu Phe Gly Gly Pro Leu Tyr Thr Phe His Lys Ile Phe Ser Ile Ile
            100                 105                 110
Thr Leu Ser Arg Gln Leu Ser Glu Glu Tyr Asp Thr Pro Ile Val Pro
            115                 120                 125
Val Phe Trp Ile Ala Gly Glu Asp His Asp Phe Glu Glu Val Asn His
            130                 135                 140
Thr Tyr Ala Phe Asn Asn Lys Glu Thr Thr Leu Lys Lys Val Lys Tyr
145                 150                 155                 160
His Thr Met Thr Pro Pro Asp Ser Asn Val Ser Arg Tyr Thr Pro Asp
                165                 170                 175
Lys Asn Glu Leu Lys Ala Ser Leu Asn His Phe Phe Lys Glu Met Lys
            180                 185                 190
Glu Thr Val His Thr Gln Asp Val Tyr Gln Met Cys Val Asn Ile Ile
            195                 200                 205
Asn Gln Phe Asp Ser Trp Thr Asp Ile Phe Lys Gly Leu Ile His Glu
            210                 215                 220
Val Phe Lys Asp Tyr Gly Ile Leu Leu Ile Asp Ala Gln Tyr Pro Glu
225                 230                 235                 240
Leu Arg Gln Met Glu Lys Pro Leu Phe Lys Glu Ile Leu Glu Lys Arg
                245                 250                 255
Asn Gln Val Asp Gln Ser Phe Arg Glu Thr Gln Ile Arg Thr Thr Gln
            260                 265                 270
Gln Gln Leu Pro Ser Met Ile Gln Thr Glu Thr Asn Thr His Leu Phe
            275                 280                 285
Ile His Glu Asp Gly Met Arg Gln Leu Leu Asn Phe Asp Gly Thr Tyr
            290                 295                 300
Phe Lys Leu Asn Lys Thr Glu Lys Arg Tyr Thr Lys Gln Asn Leu Leu
305                 310                 315                 320
Asp Ile Ile Glu Arg Glu Pro Glu Arg Ile Ser Asn Asn Val Val Thr
                325                 330                 335
Arg Pro Val Val Glu Glu Trp Leu Phe Asn Thr Val Ala Phe Ile Gly
            340                 345                 350
Gly Pro Ser Glu Ile Lys Tyr Trp Ala Glu Leu Lys Gly Val Phe Asp
            355                 360                 365
Thr Leu Asn Val Glu Met Pro Ile Val Met Pro Arg Leu Arg Ile Thr
            370                 375                 380
```

```
Tyr Leu Tyr Ala Arg Thr Lys Lys Leu Leu Lys Gln Tyr Asn Leu Ser
385                 390             395                 400
Ile Glu Ser Val Ile Ala Asn Gly Val Glu Gln Glu Arg Gln Arg Phe
                405             410                 415
Val Arg Glu Lys Ala Ser Asn Asn Phe Ile Asn Glu Val Glu Glu Met
            420             425                 430
Lys Ile Gln Gln Gln Glu Leu Tyr Asn Asn Leu Phe Thr Tyr Val Glu
            435             440                 445
Asn Asn His Asp Asn Gln Leu Leu Leu Glu Lys Asn Asn Gln Ile His
        450             455                 460
Leu Asn Gln Tyr Asp Tyr Leu Ile Lys Arg Tyr Leu Leu Asn Ile Glu
465                 470             475                 480
Arg Glu Asn Asp Ile Ser Met Arg Gln Phe Arg Glu Ile Ser Glu Thr
                485             490                 495
Leu His Pro Met Gly Gly Leu Gln Glu Arg Val Trp Asn Pro Leu Gln
            500             505                 510
Ile Met Asn Asp Phe Gly Ile Asp Val Phe Ser Pro Ser Thr Tyr Pro
            515             520                 525
Pro Leu Ser Tyr Ser Phe Asp His Leu Ile Ile Asn Pro
    530             535                 540
```

<210> 5511
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5511
```
Ile Arg Thr Leu Ser Lys Ser Phe Leu Ser Leu Thr Met Ile Ile Tyr
1               5                   10                  15
Lys Asn Ile Phe Ile Pro Cys Lys Leu Tyr Thr Lys Leu Asn Asn Asp
            20              25                  30
Ile Val Asn Ile Ala Leu Phe Ser Gln Arg
        35                  40
```

<210> 5512
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5512
```
Phe Ile Lys Tyr Thr Ile Ala Leu Asn Cys Ile Thr Leu Leu Ile Lys
1               5                   10                  15
Leu Gln Leu Ser Ser Thr Phe Tyr Cys Tyr Lys Ile Leu Leu Thr Asn
            20              25                  30
Asp Tyr Lys Ile Glu Leu Asn Asn Leu Leu Phe Asn Ser Ile Phe Ile
        35              40                  45
```

<210> 5513
<211> 64
<212> PRT
<213> S.epidermidis

<400> 5513
```
Trp Val Asp Phe Ser His Ser Ser Ser Pro Phe Asn Phe Tyr His Lys
1               5                   10                  15
Asp Tyr Thr Phe Leu Ile Val Asn Val Met Leu Ser Met Thr Phe Val
```

```
                    20                      25                      30
Lys Ala Leu Ala Val Ser Ser Asp Val Lys Gln Gly Thr Pro Phe Ser
        35                      40                      45
Thr Val Val Arg Arg Ile Trp Asn Pro Ser Arg Ser Ile Ser Phe Pro
        50                      55                      60
```

<210> 5514
<211> 68
<212> PRT
<213> S.epidermidis

<400> 5514

```
Lys Val Gly Tyr Gly Met Gln Gln Lys Lys Ser Lys Gly Ile Phe Trp
1                   5                      10                      15
Ile Phe Ser Ile Leu Ala Val Ile Phe Leu Thr Leu Phe Ser Phe Ala
                20                      25                      30
Leu Gly Val Ala Asn Val Pro Leu Met Ile Leu Thr Phe Ile Leu Leu
        35                      40                      45
Ile Ala Thr Phe Gly Val Gly Phe Ser Val Lys Lys Lys Tyr Arg Lys
        50                      55                      60
Asn Asn Trp Leu
65
```

<210> 5515
<211> 233
<212> PRT
<213> S.epidermidis

<400> 5515

```
Ile Gly Asp Leu Asn Met Lys Phe Lys Asn Ile Leu Phe Asp Phe Asp
1                   5                      10                      15
Asp Thr Leu Val Asp Phe Tyr Asp Ala Glu Lys Lys Ala Phe Tyr Asn
                20                      25                      30
Leu Ala Gln Lys Tyr Asn His Gln Pro Thr Gln Gln Asp Phe Glu His
        35                      40                      45
Phe Lys Lys Val Asn Gln Ala His Trp Glu Ala Phe Gln Gln Asn Lys
        50                      55                      60
Leu Thr Lys Asp Glu Val Leu Ser Gln Arg Phe Ile Asn Tyr Phe Asn
65                      70                      75                      80
Asp Tyr Gln Ile His Val Asn Gly Lys Glu Ala Asp Lys Cys Phe Arg
                85                      90                      95
Ala Glu Leu Ala Met Ala Pro Val Lys Leu Phe Asp His Thr Leu Glu
                100                     105                     110
Val Ile Gln Gln Leu Lys Leu Asn His Ser Leu Tyr Ile Val Thr Asn
                115                     120                     125
Gly Val Thr Glu Thr Gln Leu Arg Arg Ile Ala Gln Thr Gln Phe Asn
        130                     135                     140
Glu Ile Phe Gln Asp Val Phe Ile Ser Glu Lys Ala Gly Phe Gln Lys
145                     150                     155                     160
Pro Met Thr Glu Phe Phe Asp Phe Val Phe Glu His Ile Gly Glu Asn
                165                     170                     175
Asn Arg Asn Gln Thr Leu Ile Val Gly Asp Ser Leu Thr Ser Asp Ile
                180                     185                     190
Leu Gly Gly Lys Asn Ala Asn Ile Ser Thr Cys Trp Phe Asn Ile Arg
        195                     200                     205
Gln Lys Glu Asn His Thr Ser Ile Gln Pro Asp Tyr Ile Ile Asn Asp
```

```
         210                    215                    220
Leu Ser Glu Met Ile Arg Ile Val Glu
225                    230


<210> 5516
<211> 608
<212> PRT
<213> S.epidermidis


<400> 5516
Lys Arg Tyr His Ile Asp Phe Gln Thr Leu Ser Asn Trp Ser Asp Val
1                   5                   10                  15
Ser Met Tyr Tyr Thr Asn Ser Asn Tyr Glu Ala Phe Ala Arg Pro Lys
              20                  25                  30
Lys Pro Glu Asn Val Asp Asn Lys Ser Ala Tyr Leu Ile Gly Ala Gly
          35           ·      40                  45
Leu Ala Ser Leu Ala Ala Ala Cys Phe Leu Ile Arg Asp Gly Gln Met
          50                  55                  60
Lys Gly Glu Asn Ile His Ile Leu Glu Glu Leu Asp Ile Ser Gly Gly
65                  70                  75                  80
Ser Leu Asp Gly Ile Asn Met Glu His His Gly Tyr Val Val Arg Gly
              85                  90                  95
Gly Arg Glu Met Glu Asn His Phe Glu Cys Leu Trp Asp Leu Phe Arg
              100                 105                 110
Ser Ile Pro Ser Leu Glu Gln Thr Asn Ala Ser Val Leu Asp Glu Phe
          115                 120                 125
Tyr Trp Leu Asn Lys Glu Asp Pro Asn Tyr Ser Lys Cys Arg Ala Ile
          130                 135                 140
Glu Ser Gly Gly Lys Arg Ile Asp Thr Asp Gly Asp Phe Thr Leu Thr
145                 150                 155                 160
Lys Lys Ala Ile Lys Glu Ile Leu Asn Leu Cys Leu Met Lys Glu Glu
              165                 170                 175
Asp Leu Asp Asp Val Lys Ile Thr Asp Val Phe Ser Arg Asp Phe Leu
              180                 185                 190
Asn Ser Asn Phe Trp Leu Tyr Trp Lys Thr Met Phe Ala Phe Glu Pro
          195                 200                 205
Trp His Ser Ala Met Glu Met Arg Arg Tyr Leu Met Arg Phe Val His
          210                 215                 220
His Ile Gly Gly Leu Ala Asp Phe Ser Ala Leu Lys Phe Thr Lys Tyr
225                 230                 235                 240
Asn Gln Tyr Glu Ser Leu Val Leu Pro Met Ile Glu Tyr Leu Lys Ser
              245                 250                 255
His Ser Val Asn Phe Glu Phe Gly Val Gln Val Asn Asn Ile Leu Val
              260                 265                 270
Asp Ala Thr Pro Ser Thr Lys Ile Ala Arg Glu Ile Ile Leu Thr Arg
          275                 280                 285
Asp Asp Lys Glu Glu Ser Ile Pro Leu Thr Val Asn Asp Leu Val Phe
          290                 295                 300
Val Thr Asn Gly Ser Ile Thr Glu Ser Ser Thr Tyr Gly Asp Asn Asp
305                 310                 315                 320
His Pro Ala Pro Ile Thr His Ser Leu Gly Gly Ser Trp Thr Leu Trp
              325                 330                 335
Lys Asn Leu Ala Asn Gln Ser Pro Glu Phe Gly Arg Pro Glu Lys Phe
          340                 345          .   .  350
Cys Asp His Ile Pro Ala Lys Ser Trp Phe Val Ser Ala Thr Ala Thr
          355                 360                 365
```

Thr Asp Asn Lys Lys Ile Ile Ser Tyr Ile Glu Gln Leu Cys Lys Arg
    370   375   380
Asp Val Leu Ser Gly Arg Thr Val Thr Gly Gly Ile Ile Ser Val Ala
385   390   395   400
Asn Ser Ser Trp Gln Leu Ser Phe Thr Val Asn Arg Gln Gln Gln Phe
                405   410   415
Lys Lys Gln Pro Lys Asn Gln Val Ser Val Trp Ile Tyr Ala Leu Tyr
                420   425   430
Ser Asp Glu Lys Gly Asp Phe Ile Lys Lys Pro Ile Thr Glu Cys Thr
            435   440   445
Gly Ser Glu Ile Cys Gln Glu Val Leu Tyr His Met Gly Val Pro Gln
            450   455   460
Glu Glu Ile Val Glu Leu Ala Gln Ser Glu Cys Asn Thr Ile Pro Val
465   470   475   480
Tyr Met Pro Tyr Val Thr Ala Tyr Phe Met Pro Arg Ala Tyr Lys Asp
                485   490   495
Arg Pro Leu Val Val Pro Asn Gly Ser Lys Asn Leu Ala Phe Ile Gly
                500   505   510
Asn Phe Ala Glu Thr Ala Arg Asp Thr Val Phe Thr Thr Glu Tyr Ser
            515   520   525
Val Arg Thr Ala Met Glu Ala Val Tyr Gln Leu Leu Asp Val Asp Arg
            530   535   540
Gly Val Pro Glu Val Tyr Ala Ser Glu Phe Asp Ala Arg Val Leu Met
545   550   555   560
Asp Ala Phe Tyr Glu Leu Asn Asp Arg Lys Ser Leu His Glu Leu Val
                565   570   575
Asn Lys Asn Phe Ile Lys Arg Ser Val Leu Asn Thr Val Leu Lys Lys
                580   585   590
Ile Arg Gly Thr Phe Ile Glu Glu Leu Leu Arg Lys His Lys Leu Leu
                595   600   605

<210> 5517
<211> 311
<212> PRT
<213> S.epidermidis

<400> 5517
Met Phe His His Val Ser Val Met Leu Asn Glu Thr Ile Asp Tyr Leu
1   5   10   15
Asn Ile Lys Glu Asp Gly Val Tyr Val Asp Cys Thr Leu Gly Gly Ala
            20   25   30
Gly His Ala Leu Tyr Leu Leu Asn Gln Leu Asn Asp Lys Gly Arg Leu
        35   40   45
Ile Ala Ile Asp Gln Asp Leu Thr Ala Ile Glu Asn Ala Lys Glu Val
        50   55   60
Leu Lys Glu His Leu His Lys Val Thr Phe Val His Asn Asn Phe Arg
65   70   75   80
Glu Leu Thr Asn Ile Leu Asn Glu Leu Glu Ile Glu Lys Val Asp Gly
                85   90   95
Ile Tyr Tyr Asp Leu Gly Val Ser Ser Pro Gln Leu Asp Val Pro Glu
                100   105   110
Arg Gly Phe Ser Tyr His Asn Asp Ala Lys Leu Asp Met Arg Met Asp
        115   120   125
Gln Thr Gln Ser Leu Ser Ala Tyr Glu Val Val Asn Gln Trp Ser Tyr
    130   135   140
Glu Ala Leu Val Arg Ile Phe Phe Arg Tyr Gly Glu Glu Lys Phe Ser

```
145                    150                    155                    160
Lys Gln Ile Ala Arg Arg Ile Glu Ala His Arg Glu Gln Gln Pro Ile
                165                    170                    175
Glu Thr Thr Leu Glu Leu Val Asp Val Ile Lys Glu Gly Ile Pro Ala
            180                    185                    190
Lys Ala Arg Arg Lys Gly Gly His Pro Ala Lys Arg Val Phe Gln Ala
            195                    200                    205
Ile Arg Ile Ala Val Asn Asp Glu Leu Ser Ala Phe Glu Asp Ser Val
        210                    215                    220
Glu Gln Ala Ile Glu Cys Val Lys Val Gly Gly Arg Ile Ser Val Ile
225                    230                    235   .                240
Thr Phe His Ser Leu Glu Asp Arg Leu Cys Lys Gln Ile Phe Gln Glu
                245                    250                    255
Phe Glu Lys Gly Pro Asp Val Pro Arg Gly Leu Pro Val Ile Pro Glu
            260                    265                    270
Ala Tyr Thr Pro Lys Leu Lys Arg Val Asn Arg Lys Pro Ile Thr Ala
            275                    280                    285
Thr Asp Asp Asp Leu Asn Glu Asn Asn Arg Ala Arg Ser Ala Lys Leu
            290                    295                    300
Arg Val Ala Glu Ile Leu Lys
305                    310
```

```
<210> 5518
<211> 202
<212> PRT
<213> S.epidermidis

<400> 5518
Val Met Ser His Asp Ala Asn Thr Ile Asp Ser Arg Thr His Glu Gly
1                   5                    10                    15
Glu Leu Asn Lys Leu Gly Phe Trp Ile Phe Leu Thr Ala Glu Phe Ala
                20                    25                    30
Leu Phe Gly Thr Leu Phe Ala Thr Leu Leu Thr Leu Gln His Gly Gly
            35                    40                    45
Gly Tyr Gly Gly Lys Leu Thr Thr Asp Leu Phe Glu Leu His Leu Ile
        50                    55                    60
Leu Ile Met Thr Phe Ala Leu Leu Ile Ser Ser Tyr Thr Cys Gly Ile
65                    70                    75                    80
Ala Ile Tyr Tyr Met Arg Gln Glu Lys Gln Asn Leu Met Met Phe Trp
                85                    90                    95
Met Ile Ile Thr Val Ile Leu Gly Leu Val Phe Val Gly Phe Glu Ile
            100                    105                    110
Tyr Glu Phe Ala His Tyr Ala Ser Glu Gly Val Asn Pro Thr Ile Gly
            115                    120                    125
Ser Phe Trp Ser Ser Phe Phe Ile Leu Leu Gly Thr His Gly Ala His
        130                    135                    140
Val Ser Leu Gly Ile Val Trp Ile Cys Leu Leu Ile Gln Ile Gly
145                    150                    155                    160
Thr Arg Gly Leu Asp Ser Tyr Asn Ala Pro Lys Leu Phe Ile Val Ser
                165                    170                    175
Leu Tyr Trp His Phe Leu Asp Val Val Trp Val Phe Ile Phe Thr Ala
            180                    185                    190
Val Tyr Met Ile Gly Met Val Tyr Ser Gly
            195                    200

<210> 5519
```

<211> 297
<212> PRT
<213> S.epidermidis

<400> .5519
His Met Ile Gln Lys Leu Leu Asn Asp Ile Gln Gln Asp Asp Tyr Ala
1   5   10   15
Trp Lys Met Asp Val Leu Lys Lys Trp Lys Val Asn Thr Leu Phe Glu
            20   25   30
Arg Trp Lys Lys Arg His Thr Phe Val Asp Asp Val Asn Ile Ile Thr
        35   40   45
Lys Leu Leu Leu Gly Ile Ala Leu Phe Phe Phe Ile Ile Phe Ile His
    50   55   60
Asn Phe Asp Phe Met Ile Tyr Ile Val Ile Leu Met Phe Met Phe Leu
65   70   75   80
Leu Leu Phe Asn Gly Thr Glu Phe Lys Ile Thr Ala Ile Phe Ile Leu
                85   90   95
Val Thr Thr Leu Phe Ala Leu Met Ser Ser Leu Phe Met Ile Leu Tyr
            100   105   110
Gly Asp Gly Glu His Met Leu Val Lys Phe Gly Ile Leu Gln Ile Ser
        115   120   125
Thr Glu Ser Ile Val Arg Gly Leu His Leu Ser Met Arg Thr Ile Thr
    130   ·135   140
Val Ser Ile Phe Gly Ile Leu Ile Ala Leu Thr Ser Gln Ile Val Met
145   150   155   160
Ile Phe Tyr Ser Leu Met Gln His Leu Lys Val Lys Pro Lys Phe Ala
                165   170   175
Tyr Ala Phe Met Ala Ala Ile Arg Met Val Pro Leu Ile Ile Ser Ser
            180   185   190
Leu Ile Gln Leu Arg Arg Ser Leu Lys Met Arg Tyr Gln Met Ile Asp
        195   200   205
Ala Ser Asn Tyr Lys Gly Ile Lys Arg Leu Asn His Leu Val Ile Pro
    210   215   220
Leu Leu Ser Gln Asn Ile Arg Arg Ala His Gln Leu Ser Val Ala Met
225   230   235   240
Glu Ser Lys Gly Phe Lys Asp Gly Pro Arg Thr Tyr Tyr Tyr Arg Val
                245   250   255
Pro Phe Ser Tyr Lys Asp Ile Val Phe Ile Ala Cys Ile Leu Ile Ile
            260   265   270
Ile Thr Leu Ser Phe Val Leu Ser Ser Tyr Leu Pro Ile Thr Gly Ile
        275   280   285
His Asp Val Arg Phe Gly Gln Leu Asp
    290   295

<210> 5520
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5520
Gly Thr Ala His Asn Asp Cys Tyr Phe His Phe Val His Pro Phe Glu
1   5   10   15
Thr Phe Gly Leu Leu Leu Gly Ile Val Val Tyr Tyr Thr Tyr Ser Ile
            20   25   30
Thr Ile His Leu Val Phe Phe Asn Gln Lys Ser Asn Phe Asn Ile Asn
        35   40   45

Leu Asn Ile Asn Leu Arg Leu Leu Thr Ile Ile Cys Phe Leu Ile Asn
    50   55   60

Val Lys Val Lys Ile Leu Ile Asn Asn
65   70

<210> 5521
<211> 326
<212> PRT
<213> S.epidermidis

<400> 5521
Ala Met Ala Gln Met Thr Met Val Gln Ala Ile Asn Asp Ala Leu Lys
1   5   10   15

Ser Glu Leu Lys Arg Asp Glu Asp Val Leu Val Phe Gly Glu Asp Val
    20   25   30

Gly Val Asn Gly Gly Val Phe Arg Val Thr Glu Gly Leu Gln Lys Glu
    35   40   45

Phe Gly Glu Asp Arg Val Phe Asp Thr Pro Leu Ala Glu Ser Gly Ile
    50   55   60

Gly Gly Leu Ala Leu Gly Leu Ala Val Thr Gly Phe Arg Pro Val Met
65   70   75   80

Glu Ile Gln Phe Leu Gly Phe Val Tyr Glu Val Phe Asp Glu Val Ala
          85   90   95

Gly Gln Ile Ala Arg Thr Arg Phe Arg Ser Gly Gly Thr Lys Pro Ala
        100   105   110

Pro Val Thr Ile Arg Thr Pro Phe Gly Gly Gly Val His Thr Pro Glu
        115   120   125

Leu His Ala Asp Asn Leu Glu Gly Ile Leu Ala Gln Ser Pro Gly Leu
    130   135   140

Lys Val Val Ile Pro Ser Gly Pro Tyr Asp Ala Lys Gly Leu Leu Ile
145   150   155   160

Ser Ser Ile Gln Ser Asn Asp Pro Val Val Tyr Leu Glu His Met Lys
        165   170   175

Leu Tyr Arg Ser Phe Arg Glu Glu Val Pro Glu Lys Glu Tyr Lys Ile
        180   185   190

Asp Ile Gly Lys Ala Asn Val Lys Lys Glu Gly Asn Asp Ile Thr Leu
        195   200   205

Ile Ser Tyr Gly Ala Met Val Gln Glu Ser Leu Lys Ala Ala Glu Glu
    210   215   220

Leu Glu Lys Asp Gly Tyr Ser Val Glu Val Ile Asp Leu Arg Thr Val
225   230   235   240

Gln Pro Ile Asp Ile Asp Thr Leu Val Ala Ser Val Glu Lys Thr Gly
        245   250   255

Arg Ala Val Val Val Gln Glu Ala Gln Arg Gln Ala Gly Val Gly Ala
        260   265   270

Gln Val Ala Ala Glu Leu Ala Glu Arg Ala Ile Leu Ser Leu Glu Ala
        275   280   285

Pro Ile Ala Arg Val Ala Ala Ser Asp Thr Ile Tyr Pro Phe Thr Gln
    290   295   300

Ala Glu Asn Val Trp Leu Pro Asn Lys Lys Asp Ile Ile Glu Gln Ala
305   310   315   320

Lys Ala Thr Leu Glu Phe
        325

<210> 5522
<211> 310

<212> PRT
<213> S.epidermidis

<400> 5522
Glu Gly Gly Leu Val Leu Glu Asn Tyr Asn Phe Asn Ile Ile Glu Gln
1   5   10   15
Ser Gln Val Gly Gln Arg Ile Asp Lys Leu Val Ser Asp Leu Asn Lys
                20   25   30
Asp Trp Ser Arg Ser Gln Leu Gln Asp Trp Ile Lys Glu Gly Leu Val
            35   40   45
Lys Val Asn Gly Lys Val Ile Lys Ser Asn Tyr Lys Val Lys Leu Asn
        50   55   60
Asp Lys Ile Val Val Thr Glu Lys Glu Val Val Glu Ala Asp Ile Lys
65   70   75   80
Pro Glu Asn Leu Asn Leu Asp Ile Tyr Tyr Glu Asp Glu Asp Val Ala
                85   90   95
Val Val Tyr Lys Pro Lys Gly Met Val Val His Pro Ser Pro Gly His
                100   105   110
Tyr Ser Gly Thr Leu Val Asn Gly Leu Met Tyr Gln Ile Lys Asp Leu
        115   120   125
Ser Gly Ile Asn Gly Glu Ile Arg Pro Gly Ile Val His Arg Ile Asp
        130   135   140
Lys Asp Thr Ser Gly Leu Leu Met Val Ala Lys Asn Asp Val Ala His
145   150   155   160
Arg His Leu Val Glu Gln Leu Met Ser Lys Thr Val Lys Arg Lys Tyr
                165   170   175
Thr Ala Leu Val His Gly Asn Ile Pro His Asp Tyr Gly Thr Ile Asp
                180   185   190
Ala Pro Ile Gly Arg Asn Lys Asn Asp Arg Gln Ser Met Ala Val Val
        195   200   205
Asp Asp Gly Lys Glu Ala Val Thr His Phe Asn Val Leu Glu His Phe
        210   215   220
Lys Asp Tyr Thr Leu Ile Glu Cys Gln Leu Glu Thr Gly Arg Thr His
225   230   235   240
Gln Ile Arg Val His Met Lys Tyr Ile Gly Tyr Pro Leu Val Gly Asp
                245   250   255
Pro Lys Tyr Gly Pro Lys Lys Thr Leu Asp Ile Asp Gly Gln Ala Leu
                260   265   270
His Ala Gly Ile Ile Gly Phe Glu His Pro Val Thr His Glu Tyr Ile
            275   280   285
Glu Lys His Ala Thr Leu Pro Asn Asp Phe Glu Lys Leu Leu Asp Asp
        290   295   300
Ile Arg Arg Arg Asp Ala
305   310

<210> 5523
<211> 244
<212> PRT
<213> S.epidermidis

<400> 5523
Val Glu Lys Gln Lys Arg Thr Ser Tyr Thr Phe Ile Ile Lys His Tyr
1   5   10   15
Leu Asn Ser Tyr Gln Ser Arg Arg Ile Ile Met Pro Phe Thr Pro Ser
                20   25   30
Glu Ile Lys Asn Lys Glu Phe Thr Arg Val Lys Asn Gly Leu Glu Pro

```
        35                          40                          45
Thr Glu Val Ala Asn Tyr Leu Glu Gln Leu Ser Asn Glu Ile Glu Arg
        50                          55                          60
Leu Lys Glu Asp Lys Lys Gln Leu Glu Lys Val Ile Glu Asp Arg Asp
65                          70                          75                          80
Ser Asn Ile Lys Ser Tyr Lys Asp Val His Gln Ser Val Ser Asp Ala
                    85                          90                          95
Leu Ile Gln Ala Gln Lys Val Gly Glu Glu Thr Lys Gln Ala Ala Thr
                    100                         105                         110
Lys Glu Ala Glu Ala Val Leu Ser Lys Ala Gln Val Gln Ala Asp Ser
        115                         120                         125
Ile Val Asn Asp Ala Ile Glu Lys Ala Arg Arg Leu Ala Phe Gln Thr
        130                         135                         140
Glu Asp Met Lys Arg Gln Ser Lys Val Phe Arg Ser Arg Phe Arg Met
145                         150                         155                         160
Leu Val Glu Ala Gln Leu Asp Leu Leu Lys Ser Glu Asp Trp Asp Tyr
                    165                         170                         175
Leu Leu Asn Tyr Asp Leu Asp Ala Glu Gln Val Thr Leu Glu Asp Ile
                    180                         185                         190
His His Leu His Asp Asn Asp Leu Thr Pro Glu Glu Arg Ala Met Lys
        195                         200                         205
Gln Lys Gln Asn Gln Glu Ile Ser Ala Asn Gln Pro Ser Thr Ser Ser
        210                         215                         220
Ser Glu Ser Val Ser Gln Ser Asn Ala Asn Asn Glu Ser Ser Gln Ser
225                         230                         235                         240
Thr Ser Asn Asn
```

<210> 5524
<211> 400
<212> PRT
<213> S.epidermidis

<400> 5524
```
Ile Met Lys His Ile Leu Leu Ala Val Thr Gly Gly Ile Ala Ala Tyr
1                   5                           10                          15
Lys Ala Ile Asp Leu Thr Ser Lys Leu Ile Gln Ser Gly Tyr Asp Val
                    20                          25                          30
Arg Val Met Leu Ser Asp His Ala Gln Glu Phe Val Thr Pro Leu Ala
            35                          40                          45
Phe Gln Ala Ile Ser Arg Asn Pro Val Tyr Thr Asn Thr Phe Lys Glu
        50                          55                          60
Glu Asn Pro Glu Glu Ile Gln His Val Ser Leu Gly Asp Trp Ala Asp
65                          70                          75                          80
Ala Ile Ile Val Ala Pro Ala Thr Ala Asn Thr Ile Ala Lys Leu Ser
                    85                          90                          95
Val Gly Ile Ala Asp Asp Leu Ile Thr Ser Thr Leu Leu Ala Thr Thr
                    100                         105                         110
Thr Pro Lys Phe Val Ala Pro Ala Met Asn Val Asn Met Tyr Asn Asn
        115                         120                         125
Pro Arg Thr Lys His Asn Met Lys Val Leu Ser Gln Asp Gly Tyr Tyr
        130                         135                         140
Phe Ile Glu Pro Gly Ser Gly Tyr Leu Ala Cys Gly Tyr Val Ala Lys
145                         150                         155                         160
Gly Arg Met Glu Glu Pro Met Gln Ile Leu Ser Val Ile Asn Lys Phe
                    165                         170                         175
```

Phe Thr Gln Gln Lys Asn Val Val Lys Ser Ser Phe Ser Gly Lys Arg
          180   185   190
Ala Leu Val Thr Ala Gly Pro Thr Val Glu Val Ile Asp Pro Val Arg
          195   200   205
Tyr Val Ser Asn Arg Ser Ser Gly Lys Met Gly Tyr Ala Ile Ala Glu
          210   215   220
Ala Leu Arg Asp Lys Gly Ala Ile Val Thr Leu Ile Ser Gly Pro Thr
225   230   235   240
His Leu Ser Leu Pro Glu Gly Ile Asn Val Val Lys Val Glu Ser Ala
                    245   250   255
Asp Asp Met Phe Gln Ala Val Thr Glu Arg Phe Ala Lys Gln Asp Ile
          260   265   270
Val Ile Lys Ala Ala Ala Val Ser Asp Tyr Thr Pro Met Asp Ile Leu
          275   280   285
Glu His Lys Leu Lys Lys Gln Glu Gly Gly Leu Ser Val Gln Phe Lys
          290   295   300
Arg Thr Lys Asp Ile Leu Lys Tyr Leu Gly Glu Asn Lys Thr His Gln
305   310   315   320
Tyr Leu Val Gly Phe Ala Ala Glu Thr Gln Asn Ile Glu Gln Tyr Ala
                    325   330   335
Leu Asp Lys Leu Lys Arg Lys Asn Ala Asp Val Ile Ile Ser Asn Asn
                    340   345   350
Val Gly Asp Thr Ser Ile Gly Phe Ser Ser Asp Asp Asn Glu Leu Thr
          355   360   365
Met His Phe Lys Asn Asn Glu Lys Val Asn Ile Lys Lys Gly Lys Lys
          370   375   380
Ser Ala Leu Ala His Gln Ile Ile Glu Ile Leu Glu Thr Arg Trp Gln
385   390   395   400

<210> 5525
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5525
Ile Met Glu Gln Leu Phe Asp Ala Ile Arg Ser Val Val Asp Ala Gly
1   5   10   15
Ile Asn Gln Asp Trp Ser Gln Leu Ala Ser Gly Ile Ala Gly Ile Val
          20   25   30
Glu Asn Gly Val Ser Ile Ile Ser Lys Leu Leu Gly Gln
          35   40   45

<210> 5526
<211> 252
<212> PRT
<213> S.epidermidis

<400> 5526
Arg Trp Arg His Ile Leu Met Glu Gln Ile Thr Ser Ala Gln Asn Ser
1   5   10   15
Lys Ile Lys Asn Ala Asn Lys Leu Lys Lys Lys Arg Glu Arg Asp Lys
          20   25   30
Thr Gly Leu Ala Leu Ile Glu Gly Ile His Leu Ile Glu Glu Ala Tyr
          35   40   45
Gln Ser Gln Ile Glu Val Ile Gln Leu Phe Ile Val Asp Ser Asp Arg
          50   55   60

```
Met Ser Ser Ser Ile Ile Asp Tyr Ala Lys Glu Val Tyr Gln Ile Asn
65                  70                  75                  80
Leu Lys Val Ala Glu Ala Leu Ser Gly Thr Val Thr Pro Gln Gly Phe
                85                  90                  95
Phe Ala Ile Ile Lys Lys Pro Thr Tyr Asp Lys Thr Leu Ala Lys Gln
            100                 105                 110
Val Leu Leu Ile Asp Arg Ile Gln Asp Pro Gly Asn Leu Gly Thr Leu
        115                 120                 125
Ile Arg Thr Ala Asp Ala Ala Gly Leu Asp Leu Ile Val Met Glu Lys
    130                 135                 140
Gly Thr Ala Asp Pro Phe Gln Asp Lys Val Ile Arg Ala Ser Gln Gly
145                 150                 155                 160
Ser Ile Phe His Ile Pro Val Ile Phe Asp Asp Ile Asn Asn Tyr Ile
                165                 170                 175
His Gln Phe Asn Gly Pro Val Tyr Gly Thr Ala Leu Glu Asn Ala Val
            180                 185                 190
Ser Phe Asn Asp Val Glu Ala Gln Val Asn Phe Ala Leu Ile Leu Gly
        195                 200                 205
Asn Glu Gly Glu Gly Val Asn Pro Asp Leu Leu Lys Glu Thr Thr Gln
    210                 215                 220
Asn Leu Thr Ile Pro Ile Tyr Gly Lys Ala Glu Ser Leu Asn Val Ala
225                 230                 235                 240
Ile Ala Gly Ser Ile Leu Met Tyr Gln Leu Lys Gly
                245                 250
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<210> 5527
<211> 210
<212> PRT
<213> S.epidermidis

<400> 5527
Leu Leu Thr His Asn Phe Pro Arg Glu Gly Cys Ala Phe Phe Arg Arg
1               5                   10                  15
Met Phe Phe Met Ser Lys Gly Leu Lys Leu Ser Glu Ile Leu Val Thr
            20                  25                  30
Val Leu Ile Ser Val Val Phe Ala Ile Ile Tyr Asn Leu Trp Trp Phe
        35                  40                  45
Val Tyr Asn Ile Val Gln Val Ala Gly Ile His Leu Glu Gln Leu Thr
    50                  55                  60
Tyr Gly Val Trp Phe Met Ala Ala Val Val Cys Tyr Leu Ile Ile Pro
65                  70                  75                  80
Lys Pro Gly Ile Ala Leu Leu Ala Glu Ile Ala Ala Gly Ala Gly Glu
                85                  90                  95
Thr Ile Val Met Gly Lys Phe Asp Ile Pro Thr Ile Ile Tyr Ala Ile
            100                 105                 110
Leu Gln Gly Leu Ala Cys Glu Ile Ile Phe Ala Ile Phe Lys Tyr Lys
        115                 120                 125
Ser Arg Ser Ala Ala Val Ala Met Leu Ala Gly Leu Ala Thr Ala Leu
    130                 135                 140
Ile Ser Phe Pro Val Asp Tyr Phe Tyr Gly Tyr Leu Asn Glu Val Ala
145                 150                 155                 160
Gly Trp Asn Leu Leu Leu Phe Ile Val Phe Arg Ser Ile Ser Gly Ile
                165                 170                 175
Val Leu Ala Gly Leu Val Ser Tyr Trp Ile Val Lys Ala Leu Asp Lys
            180                 185                 190
Thr Gly Val Thr Lys Phe Phe Arg Pro Ala Ser Gln Gln Asp Tyr Asp
```

```
           195                    200                      205
Asn Leu
      210


<210> 5528
<211> 407
<212> PRT
<213> S.epidermidis


<400> 5528
Ser Val Arg Gln Thr Ile Lys Met Lys Leu Asn Lys Phe Lys Ile Val
1                5                   10                      15
Phe Phe Ile Ile Val Leu Leu Thr Leu Val Val Ser Ile Gly Ile Leu
            20                  25                  30
Gly Val Glu Trp Thr Arg His Leu Glu Leu Lys Lys Gln Thr Leu Ser
            35                  40                  45
Gln Glu Ser Gly Asn Thr Asn Tyr Ile Glu Lys Arg Asp Lys Thr Val
        50                  55                  60
Glu Lys Pro Lys Lys Ile Lys Thr Lys Tyr Asp Lys Lys Asp Pro Thr
65                  70                  75                      80
Ser Lys Ser Ile Asn Lys Tyr Leu Glu Lys Thr Gln Phe Asn Gly Thr
                85                  90                  95
Val Ala Val Phe Asp Asn Gly Lys Val Lys Met Asn Lys Gly Tyr Gly
            100                 105                 110
Tyr Gln Asp Ile Glu Lys Gly Lys Lys Asn Thr Ala Asn Thr Met Tyr
        115                 120                 125
Leu Ile Gly Ser Ala Gln Lys Phe Thr Thr Gly Leu Met Leu Lys Gln
        130                 135                 140
Leu Glu Val Glu Asn Lys Val Asn Leu Gln Asp Ser Val Thr Lys Tyr
145                 150                 155                     160
Ile Pro Trp Phe Lys Thr Asn Lys Glu Ile Thr Ile Lys Asp Leu Met
                165                 170                 175
Leu His Lys Ser Gly Leu Tyr Lys Tyr Glu Ala Ser Thr Asn Ile Lys
                180                 185                 190
Asn Leu Glu Gln Ala Val Arg Ala Ile Gln Ala Arg Gly Ile Asp Asp
        195                 200                 205
Thr Val Tyr His Lys His Gln Tyr Asn Asp Ala Asn Tyr Leu Val Leu
        210                 215                 220
Ala Lys Val Ile Glu Asn Val Thr Gly Lys Pro Tyr Val Lys Asn Tyr
225                 230                 235                     240
Tyr Glu Arg Leu Gly Asn Lys Tyr Asn Leu Lys His Thr Ala Phe Tyr
                245                 250                 255
Asp Glu Lys Pro Leu Gln Ser Glu Met Ala Lys Gly Tyr Lys Phe Lys
                260                 265                 270
Asn Asn Thr Phe Ser Phe Leu Lys Pro Asn Ile Leu Asp Gln Tyr Tyr
            275                 280                 285
Gly Ala Gly Asn Leu Tyr Met Thr Pro His Asp Met Gly Lys Leu Ile
        290                 295                 300
Tyr Thr Leu Gln Gln Asn Lys Ile Phe Asn Ala Arg Gln Thr Arg Pro
305                 310                 315                     320
Ile Leu His Glu Phe Gly Thr Gln Glu Tyr Pro Glu Glu Tyr Arg Tyr
                325                 330                 335
Gly Phe Tyr Ile Thr Pro Tyr Leu Asn Arg Val Asn Gly Val Phe Phe
            340                 345                 350
Gly Gln Ile Phe Thr Val Tyr Phe Asn Asp Arg Tyr Ile Val Ile Leu
        355                 360                 365
```

```
Gly Thr Asn Val Ser Asn Thr Pro Gly Leu Val Ser Asn Glu Asp Lys
    370                 375                 380
Met Arg His Ile Phe Tyr Asn Ile Leu Asp Gln Lys Lys Pro Tyr Asn
385                 390                 395                 400
Thr Ala Gly Val Lys Val Glu
                405
```

<210> 5529
<211> 99
<212> PRT
<213> S.epidermidis

<400> 5529
```
Asn His Phe Asn Pro Arg Ser Gly Glu Ile Ser Met Gly Glu Phe Lys
1               5                   10                  15
Asn Arg Ile Asn Val Thr Ile Asn Asp Gln His Phe Thr Ile Ile Gly
            20                  25                  30
Glu Asp Ser Pro Glu His Ile Arg Tyr Val Ala His Leu Val Asp Glu
        35                  40                  45
Lys Met Gln Glu Leu Gly Gln Lys Ser Ala Gly Leu Asp Thr Thr Arg
    50                  55                  60
Lys Ala Ile Leu Thr Ser Val Asn Ile Met His Glu Lys Val Ile Leu
65                  70                  75                  80
Glu Glu Glu Asn Arg Arg Leu Gln Gln Glu Ile Asn Gln Leu Lys Gln
                85                  90                  95
Arg Asp Glu
```

<210> 5530
<211> 222
<212> PRT
<213> S.epidermidis

<400> 5530
```
Ile Asn Phe Lys Ser Leu Cys Tyr Asn Ile His Asn His Ile Lys Arg
1               5                   10                  15
Arg His Ile Met Thr Gln Tyr Thr Phe Ser Pro Lys Asp Phe Lys Ala
            20                  25                  30
Phe Glu Val Glu Gly Leu Asp Gln Arg Met Glu Ala Leu Asn Asp Tyr
        35                  40                  45
Val Arg Pro Gln Leu His Gln Leu Gly Ser Tyr Phe Glu Glu Tyr Phe
    50                  55                  60
Thr Thr Gln Thr Gly Glu Thr Phe Tyr Ala His Val Ala Lys His Ala
65                  70                  75                  80
Arg Arg Ser Val Asn Pro Pro Ile Asp Thr Trp Val Ala Phe Ala Pro
                85                  90                  95
Asn Lys Arg Gly Tyr Lys Met Leu Pro His Phe Gln Ile Gly Leu Phe
                100                 105                 110
Arg Asn Gln Leu Phe Ile Met Phe Gly Ile Met His Glu Gly Arg Asn
            115                 120                 125
Lys Glu Glu Lys Val Lys Ile Phe Asp Lys His Phe Asp Lys Leu Thr
    130                 135                 140
Ser Leu Pro Ser Asp Tyr Ser Val Ser Leu Asp His Met Lys Thr Glu
145                 150                 155                 160
Lys His Tyr Ile Lys Asp Met Ser Asn Glu Glu Leu His Ala Ala Ile
                165                 170                 175
```

Asp Arg Val Lys Asn Val Lys Lys Gly Glu Phe Phe Val Ala Arg Thr
        180   185   190
Leu Ser Pro Thr Asp Lys Arg Leu Lys Ser Asp Lys Ser Phe Leu Lys
        195   200   205
Phe Val Glu Glu Thr Phe Asp Glu Phe Leu Lys Phe Tyr Gln
        210   215   220

<210> 5531
<211> 290
<212> PRT
<213> S.epidermidis

<400> 5531
Glu Trp Phe Lys Val Val Ala Lys Ile Leu Asp Gly Lys Gln Ile Ala
1   5   10   15
Lys Glu Tyr Arg Gln Arg Leu Lys Asn Gln Val Asn Asp Leu Lys Glu
        20   25   30
Tyr Gly Phe Thr Pro Lys Leu Ser Val Ile Leu Val Gly Asn Asp Gly
        35   40   45
Ala Ser Gln Ser Tyr Val Lys Ser Lys Lys Ala Ala Glu Lys Ile
    50   55   60
Gly Met Ile Ser Glu Ile Ile His Leu Asp Glu Ser Thr Ser Glu Glu
65   70   75   80
Val Val Leu Ser Glu Leu Asn Arg Leu Asn Asn Asp Asp Thr Val Ser
                85   90   95
Gly Ile Leu Val Gln Val Pro Leu Pro Lys Gln Val Ser Glu Gln Lys
            100   105   110
Val Leu Glu Ala Ile Asn Pro Glu Lys Asp Val Asp Gly Phe His Pro
            115   120   125
Ile Asn Ile Gly Lys Leu Tyr Ile Asp Glu Gln Thr Phe Val Pro Cys
            130   135   140
Thr Pro Leu Gly Ile Met Glu Ile Leu Lys His Ala Asp Ile Asn Leu
145   150   155   160
Glu Gly Lys Asn Ala Val Val Ile Gly Arg Ser His Ile Val Gly Gln
                165   170   175
Pro Val Ser Lys Leu Leu Leu Gln Ala Asn Ala Thr Val Thr Ile Leu
            180   185   190
His Ser Arg Thr Lys Asn Met Asn Ala His Leu Lys Gln Ala Asp Val
        195   200   205
Ile Val Ser Ala Val Gly Gln Pro Gly Leu Val Thr Lys Glu Asn Val
    210   215   220
Lys Lys Gly Ala Val Ile Ile Asp Val Gly Asn Thr Pro Asp Glu Asn
225   230   235   240
Gly Lys Leu Lys Gly Asp Val Ala Tyr Asp Glu Val Lys Glu Ile Ala
                245   250   255
Ser Ala Ile Thr Pro Val Pro Gly Gly Val Gly Pro Leu Thr Ile Thr
            260   265   270
Met Val Leu Asn Asn Thr Leu Leu Ala Glu Lys Leu Arg Arg Gly Leu
        275   280   285
Thr Lys
    290

<210> 5532
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5532
Ser Ser Leu Lys Asn Ile Tyr Lys Ile Glu Lys Ala Ser Asp Ile Arg
1   5   10   15
Asn Lys Gln Tyr Ala Arg Leu Thr Pro Ile Leu Thr Arg Cys Thr Met
            20   25   30
Phe Thr Val Ser Tyr Ala Ser Val Phe Ile Ser Tyr Gln
            35   40   45

<210> 5533
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5533
Met Glu Val Asn Lys Val Ile Tyr Ile Leu Leu Ala Val Phe Leu Gly
1   5   10   15
Ser Phe Gly Ile His Lys Phe Tyr Ala Gly Lys Pro Ile Gln Gly Leu
            20   25   30
Leu His Ile Leu Phe Cys Trp Thr Ala Ile Pro His Val Leu Ala Ile
            35   40   45
Ile Ser Ala Val Leu Thr Leu Phe Lys Pro Ala Asp Ala Asn Gly Asn
        50   55   60
Val Arg Met
65

<210> 5534
<211> 370
<212> PRT
<213> S.epidermidis

<400> 5534
Met Ala Pro Lys Leu Gln Ala Gln Phe Asp Ala Val Lys Val Leu Asn
1   5   10   15
Glu Thr Gln Ser Lys Phe Glu Met Val Gln Ile Leu Asp Glu Asp Gly
            20   25   30
Asn Val Val Asn Glu Asp Leu Val Pro Asp Leu Thr Asp Glu Gln Leu
            35   40   45
Val Glu Leu Met Glu Arg Met Val Trp Thr Arg Ile Leu Asp Gln Arg
        50   55   60
Ser Ile Ser Leu Asn Arg Gln Gly Arg Leu Gly Phe Tyr Ala Pro Thr
65   70   75   80
Ala Gly Gln Glu Ala Ser Gln Leu Ala Ser Gln Tyr Ala Leu Glu Ser
            85   90   95
Glu Asp Phe Ile Leu Pro Gly Tyr Arg Asp Val Pro Gln Ile Ile Trp
            100   105   110
His Gly Leu Pro Leu Thr Asp Ala Phe Leu Phe Ser Arg Gly His Phe
            115   120   125
Lys Gly Asn Gln Phe Pro Glu Gly Val Asn Ala Leu Ser Pro Gln Ile
            130   135   140
Ile Ile Gly Ala Gln Tyr Ile Gln Thr Ala Gly Val Ala Phe Gly Leu
145   150   155   160
Lys Lys Arg Gly Lys Asn Ala Val Ala Ile Thr Tyr Thr Gly Asp Gly
                165   170   175
Gly Ser Ser Gln Gly Asp Phe Tyr Glu Gly Ile Asn Phe Ala Ser Ala
            180   185   190

```
Tyr Lys Ala Pro Ala Ile Phe Val Ile Gln Asn Asn Asn Tyr Ala Ile
    195                 200                 205
Ser Thr Pro Arg Ser Lys Gln Thr Ala Ala Glu Thr Leu Ala Gln Lys
    210       .         215                 220
Ala Ile Ser Val Gly Ile Pro Gly Ile Gln Val Asp Gly Met Asp Ala
225                 230                 235                 240
Leu Ala Val Tyr Gln Ala Thr Leu Glu Ala Arg Glu Arg Ala Val Ala
            245                 250                 255
Gly Glu Gly Pro Thr Val Ile Glu Thr Leu Thr Tyr Arg Tyr Gly Pro
            260                 265                 270
His Thr Met Ala Gly Asp Asp Pro Thr Arg Tyr Arg Thr Ser Asp Glu
    275                 280                 285
Asp Ala Glu Trp Glu Lys Lys Asp Pro Leu Val Arg Phe Arg Lys Tyr
    290                 295                 300
Leu Glu Ala Lys Gly Leu Trp Asn Glu Asp Lys Glu Asn Glu Val Val
305                 310                 315                 320
Glu Arg Ala Lys Ser Glu Ile Lys Ala Ala Ile Lys Glu Ala Asp Asn
            325                 330                 335
Thr Glu Lys Gln Thr Val Thr Ser Leu Met Asp Ile Met Tyr Glu Glu
            340                 345                 350
Met Pro Gln Asn Leu Ala Glu Gln Tyr Glu Ile Tyr Lys Glu Lys Glu
            355                 360                 365
Ser Lys
    370


<210> 5535
<211> 46
<212> PRT
<213> S.epidermidis


<400> 5535
Glu Ile Thr Lys Asn Thr Met Ser Glu Ile Gln Val Lys Thr Arg Cys
1               5               10                  15
Asp Phe Leu Asp Cys Lys Lys Pro His Val Thr Gln Asn Asp His Lys
            20                  25                  30
Pro Leu Ala Lys Trp Lys Thr Thr Ala Met Thr Gln Ile Met
        35                  40                  45


<210> 5536
<211> 281
<212> PRT
<213> S.epidermidis


<400> 5536
Val Met Ala Asn Gln Ser Leu Lys Glu Thr Pro Lys Thr Gln Ser Asn
1               5               10                  15
Pro Gln Thr Gln Val Gln Gly Gln Asn Gln Gln Pro Lys Gln Lys Thr
            20                  25                  30
Val Lys Leu Ile Ile Lys Arg Gln Asp Asn Ser Glu Ser Lys Pro Tyr
        35                  40                  45
Glu Glu Ser Phe Glu Ile Pro Tyr Lys Glu Asn Leu Asn Val Ile Ala
    50                  55                  60
Cys Leu Met Glu Ile Arg Arg Asn Pro Val Asn Ser Lys Gly Glu Lys
65                  70                  75                  80
Thr Thr Pro Val Thr Trp Asp Met Asn Cys Leu Glu Glu Val Cys Gly
            85                  90                  95
```

```
Ala Cys Ser Met Val Ile Asn Gly Arg Ala Arg Gln Ser Cys Ser Ala
            100                 105                 110
Ile Val Asp Gln Leu Glu Gln Pro Ile Arg Leu Glu Pro Met Ser Thr
            115                 120                 125
Phe Pro Val Ile Arg Asp Leu Gln Val Asp Arg Ser Arg Met Phe Asp
        130                 135                 140
Asn Leu Lys Arg Met Lys Ala Trp Ile Pro Ile Asp Gly Thr Tyr Asp
145                 150                 155                 160
Leu Gly Pro Gly Pro Arg Met Pro Glu Lys Lys Arg Gln Thr Ala Tyr
                165                 170                 175
Glu Leu Ser Lys Cys Met Thr Cys Gly Val Cys Leu Glu Val Cys Pro
            180                 185                 190
Asn Val Thr Lys Asn Asn Lys Phe Val Gly Ala Gln Ala Ile Ser Gln
        195                 200                 205
Val Arg Leu Phe Asp Leu His Pro Thr Gly Ser Met Thr Lys Asp Glu
    210                 215                 220
Arg Leu Asp Ala Leu Met Ser Ala Gly Gly Leu Gln Glu Cys Gly Asn
225                 230                 235                 240
Ser Gln Asn Cys Val Asn Ala Cys Pro Lys Gly Ile Pro Leu Thr Thr
                245                 250                 255
Ser Ile Ala Ala Met Asn Arg Glu Thr Ser Phe His Met Phe Lys Ser
            260                 265                 270
Phe Phe Gly Ser Asp His Gln Val Asp
            275                 280


<210> 5537
<211> 246
<212> PRT
<213> S.epidermidis

<400> 5537
Val Val Ala Asn Gln Lys Lys Lys Glu Met Val His Asp Phe Gln Gln
1                   5                   10                  15
Lys Phe Thr Asp Lys Met Lys Ser Leu Gly Leu His Phe Lys Asn Ile
            20                  25                  30
Asp Leu Tyr Gln Gln Ala Phe Ser His Ser Ser Phe Ile Asn Asp Phe
            35                  40                  45
Asn Met Asn Arg Leu Glu His Asn Glu Arg Leu Glu Phe Leu Gly Asp
        50                  55                  60
Ala Val Leu Glu Leu Thr Val Ser Arg Tyr Leu Phe Asp Arg His Pro
65                  70                  75                  80
His Leu Pro Glu Gly Asn Leu Thr Lys Met Arg Ala Thr Ile Val Cys
                85                  90                  95
Glu Pro Ser Leu Val Ile Phe Ala Asn Lys Ile Lys Leu Asn Glu Leu
            100                 105                 110
Ile Leu Leu Gly Lys Gly Glu Glu Lys Thr Gly Gly Arg Thr Arg Pro
            115                 120                 125
Ser Leu Ile Ser Asp Ala Phe Glu Ala Phe Val Gly Ala Leu Tyr Leu
        130                 135                 140
Asp Gln Gly Leu Asp Ser Val Trp Thr Phe Ala Glu Lys Val Ile Phe
145                 150                 155                 160
Pro Tyr Val Glu Asp Asp Glu Leu Val Gly Val Val Asp Phe Lys Thr
                165                 170                 175
Gln Phe Gln Glu Tyr Val His Ser Gln Asn Lys Gly Asp Val Thr Tyr
            180                 185                 190
Gln Leu Ile Lys Glu Glu Gly Pro Ala His His Arg Leu Phe Thr Ser
```

```
             195                    200                    205
Glu Val Ile Leu Glu Asn Lys Ala Val Ala Glu Gly Lys Gly Lys Thr
        210                    215                    220
Lys Lys Glu Ser Glu Gln Lys Ala Ala Glu Gln Ala Tyr Lys Leu Met
225                    230                    235                    240
Lys Asn Lys Lys Ser Leu
                    245
```

<210> 5538
<211> 269
<212> PRT
<213> S.epidermidis

<400> 5538
```
Lys Glu Asn Lys Met Phe His Asn Lys Asn Ala Asn Phe Val Asn Gly
1                   5                   10                     15
Val Thr Ile Asn Ile Lys Asp Lys Glu Thr Ile Lys Thr Phe Tyr Glu
        20                     25                     30
Asn Val Leu Gly Phe Asn Leu Ile Asn Glu Ser Glu Thr Ala Val Gln
        35                     40                     45
Phe Glu Val Gly Asp Ser Asn Gln Phe Ile Thr Phe Ile Glu Ile Gln
    50                     55                     60
Asn Gly Arg Glu Pro Leu Met Ser Glu Ala Gly Leu Phe His Ile Gly
65                     70                     75                     80
Ile Leu Leu Pro Thr Leu Thr Thr Leu Ala Asp Leu Leu Val His Leu
                85                     90                     95
Ser Asp Phe Glu Val Pro Val Asn Gly Gly Gln Gln Ser Val Ala Thr
            100                    105                    110
Cys Leu Phe Ile Glu Asp Pro Glu Gly Asn Ala Ile Lys Phe Tyr Val
        115                    120                    125
Asp Arg Glu Thr Glu Ser Trp Ile Asp Glu Lys Glu Gly Arg Ile Arg
        130                    135                    140
Met Asp Ile Ala Pro Ile Asn Val Pro Arg Leu Leu Gln Asn Val Ser
145                    150                    155                    160
His Thr Gln Trp Gln Gly Ile Pro Asp Glu Thr Lys Leu Gly Ser Leu
                165                    170                    175
His Ile Lys Ser Ile Arg Ile Ser Asp Val Lys Ser Tyr Tyr Leu Asn
            180                    185                    190
Tyr Phe Gly Leu Glu Glu Ser Ala Tyr Met Asp Asp Tyr Ser Leu Phe
            195                    200                    205
Leu Ser Ser Asn Glu Tyr Tyr Asn His Leu Ala Val Asn Gln Trp Leu
        210                    215                    220
Ser Ala Thr Lys Arg Val Asp Asn Glu His Thr Tyr Gly Leu Ala Met
225                    230                    235                    240
Ile Asp Phe His Tyr Pro Lys Thr Thr His Lys Asn Leu Lys Gly Pro
                245                    250                    255
Asp Gly Ile Tyr Phe Arg Phe Asn Arg Ile Lys Glu Val
            260                    265
```

<210> 5539
<211> 215
<212> PRT
<213> S.epidermidis

<400> 5539
```
Arg Asn Asp Asn Val Lys Ile Asn Leu Leu Cys Ser Gln Arg Leu Leu
```

```
1                   5                        10                      15
Pro Asn His Ile Phe Glu Lys Glu Lys Asp Ser Asn Trp Ala Gly Ile
            20                      25                      30
Asp Arg Gly Ala Leu Ile Leu Val Lys Gln Gly Ile Gln Pro Ile Phe
        35                      40                      45
Ser Val Gly Asp Phe Asp Ser Val Asn Asn Glu Glu Arg Leu Met Leu
        50                      55                      60
Met Lys Asn Leu Gln Ile Glu Pro Val Glu Ala Glu Lys Asp Asp Thr
65                      70                      75                      80
Asp Leu Ala Leu Gly Val Ala Gln Ala Val Glu Arg Gly Tyr Thr Glu
                85                      90                      95
Ile Thr Ile Tyr Gly Ala Thr Gly Gly Arg Leu Asp His Phe Met Gly
            100                     105                     110
Val Leu Gln Ile Leu Gln Lys Pro Gln Tyr Leu His Gln Ser Ile Lys
            115                     120                     125
Ile Lys Val Ile Asp Gln Gln Asn His Ile Gln Leu Leu Asn Glu Gly
        130                     135                     140
Lys Tyr Val Ile Asn Arg Asp Ser Thr Tyr Pro Tyr Ile Ser Phe Ile
145                     150                     155                     160
Pro Leu Asn Asp Lys Thr Ile Leu Thr Leu Gln Gly Phe Lys Tyr Asn
                165                     170                     175
Leu Asn Gln Glu His Leu Asn Leu Gly Ser Thr Leu Thr Ile Ser Asn
            180                     185                     190
Glu Val Lys Val Asn Glu Ala Ile Ile Arg Val Glu Gln Gly Thr Val
            195                     200                     205
Leu Lys Ile Arg Ser Arg Asp
    210                     215


<210> 5540
<211> 210
<212> PRT
<213> S.epidermidis

<400> 5540
Val Ile Asp Lys Glu Ser Val Met Ile Phe Lys Glu Tyr Leu Arg Leu
1                   5                        10                      15
Gly Thr Lys Met Arg Gly Glu Arg Leu Lys Leu Lys Lys Asn Asp Arg
            20                      25                      30
Arg Val Ala Ile Lys Glu Ala Ile Glu Leu Asn Pro Phe Ile Thr Asp
        35                      40                      45
Tyr Glu Leu Cys Glu Lys Phe Asp Val Ser Ile Gln Thr Ile Arg Leu
        50                      55                      60
Asp Arg Thr His Leu Asn Ile Pro Glu Leu Arg Lys Arg Ile Lys Leu
65                      70                      75                      80
Val Ala Glu Gln Asn Tyr Gly Arg Ile Lys Ser Ile Glu Ala Asn Glu
                85                      90                      95
Ile Ile Gly Asp Leu Ile Gln Val Asn Pro Asp Val Ser Ala Gln Ser
            100                     105                     110
Leu Ile Glu Ile Thr Ile Asp Ser Val Phe Ala Lys Ser Glu Ile Ala
            115                     120                     125
Arg Gly His Val Leu Phe Ala Gln Ala Asn Ser Leu Cys Val Ala Leu
        130                     135                     140
Ile His Lys Pro Ile Val Leu Thr His Glu Ser Gln Val Glu Phe Lys
145                     150                     155                     160
Glu Lys Val Lys Leu Asn Asp Thr Val Arg Ala Asp Ala Arg Val Ile
                165                     170                     175
```

```
Asp Ile Thr Asp Lys His Tyr Ile Ile Glu Val Asn Ser Tyr Val Ser
        180                 185                 190
Asp Met Leu Val Phe Lys Gly Lys Phe Lys Met Tyr Tyr Thr Ser Glu
        195                 200                 205
Asp Glu
    210
```

<210> 5541
<211> 208
<212> PRT
<213> S.epidermidis

<400> 5541
```
Gly Met Asp Lys Glu Lys Gly Leu Leu Ile Val Leu Ser Gly Pro Ser
1               5                   10                  15
Gly Val Gly Lys Gly Thr Val Arg Lys Lys Ile Phe Glu Asp Pro Thr
        20                  25                  30
Thr Ser Tyr Lys Tyr Ser Ile Ser Met Thr Thr Arg His Met Arg Glu
        35                  40                  45
Gly Glu Ile Asp Gly Val Asp Tyr Phe Phe Lys Thr Lys Glu Glu Phe
        50                  55                  60
Glu Ala Leu Ile Lys Asp Asp Gln Phe Ile Glu Tyr Ala Gln Tyr Val
65                  70                  75                  80
Gly Asn Tyr Tyr Gly Thr Pro Val Gln Tyr Val Lys Asp Thr Met Glu
            85                  90                  95
Glu Gly His Asp Val Phe Leu Glu Ile Glu Val Glu Gly Ala Lys Gln
            100                 105                 110
Val Arg Lys Lys Phe Pro Asp Ala Leu Phe Ile Phe Leu Ala Pro Pro
        115                 120                 125
Ser Leu Asp Asp Leu Lys Glu Arg Leu Val Gly Arg Gly Thr Glu Ser
        130                 135                 140
Asp Glu Lys Ile Gln Ser Arg Val Asn Glu Ala Arg Lys Glu Val Glu
145                 150                 155                 160
Met Met Asn Leu Tyr Asp Tyr Val Val Val Asn Asp Glu Val Glu Leu
            165                 170                 175
Ala Lys Asn Arg Ile Gln Ser Ile Val Glu Ala Glu His Leu Lys Arg
            180                 185                 190
Glu Arg Ile Glu Ala Lys Tyr Arg Lys Met Leu Leu Glu Val Lys Lys
        195                 200                 205
```

<210> 5542
<211> 516
<212> PRT
<213> S.epidermidis

<400> 5542
```
Phe Arg Arg Lys Asn Lys Arg Lys Arg Phe Arg Tyr Gln Thr Lys Met
1               5                   10                  15
Gly Arg Gly Tyr Ser Ser Met Ser Asn Tyr Ser Gly Leu Asn Glu Glu
        20                  25                  30
Cys Gly Val Phe Gly Ile Trp Asn His Pro Glu Ala Ala Gln Leu Thr
        35                  40                  45
Tyr Met Gly Leu His Ser Leu Gln His Arg Gly Gln Glu Gly Ala Gly
        50                  55                  60
Ile Val Val Ser Asn His Glu Thr Leu Lys Gly Glu Arg Gly Leu Gly
65                  70                  75                  80
```

```
Leu Leu Thr Glu Ala Ile Lys Asp Glu His Met Ser Asn Ile Lys Gly
            85                      90                      95
Tyr Pro His Ala Ile Gly His Val Arg Tyr Ala Thr Ser Gly Asn Lys
            100                     105                 110
Gly Ile Glu Asn Ile Gln Pro Phe Leu Tyr His Phe Tyr Asp Met Ser
        115                 120                 125
Val Gly Ile Cys His Asn Gly Asn Leu Ile Asn Ala Lys Ser Leu Arg
        130                 135                 140
Gln Asn Leu Glu Glu Gln Gly Ala Ile Phe His Ser Ser Ser Asp Thr
145                 150                 155                 160
Glu Val Ile Met His Leu Ile Arg Arg Ser Lys Ala Pro Thr Phe Glu
            165                     170                 175
Glu Ala Leu Lys Glu Ser Leu Arg Leu Ile Lys Gly Gly Phe Thr Phe
            180                 185                 190
Ala Ile Leu Thr Lys Asp Ala Leu Tyr Gly Ala Val Asp Pro Asn Ala
        195                 200                 205
Ile Arg Pro Leu Val Val Gly Lys Met Glu Asn Gly Ala Tyr Ile Leu
        210                 215                 220
Ala Ser Glu Thr Cys Ala Ile Asp Val Leu Gly Ala Glu Phe Ile Gln
225                 230                 235                 240
Asp Ile His Ala Gly Glu Tyr Val Val Ile Thr Asp Glu Gly Ile Glu
            245                 250                 255
Val Lys Thr Tyr Thr Arg Gln Thr Thr Thr Ala Ile Ser Ala Met Glu
            260                 265                 270
Tyr Ile Tyr Phe Ala Arg Pro Asp Ser Thr Ile Ala Gly Lys Asn Val
            275                 280                 285
His Ala Val Arg Lys Ala Ser Gly Lys Arg Leu Ala Gln Glu Asn Pro
        290                 295                 300
Ala Lys Ala Asp Met Val Ile Gly Val Pro Asn Ser Ser Leu Ser Ala
305                 310                 315                 320
Ala Ser Gly Tyr Ala Glu Glu Ile Gly Leu Pro Tyr Glu Met Gly Leu
            325                 330                 335
Val Lys Asn Gln Tyr Val Ala Arg Thr Phe Ile Gln Pro Thr Gln Glu
            340                 345                 350
Leu Arg Glu Gln Gly Val Arg Val Lys Leu Ser Ala Val Lys Asp Ile
    355                 360                 365
Val Asp Gly Lys Asp Ile Val Leu Val Asp Asp Ser Ile Val Arg Gly
370                 375                 380
Thr Thr Ile Lys Arg Ile Val Lys Met Leu Lys Asp Ser Gly Ala Asn
385                 390                 395                 400
Arg Ile His Val Arg Ile Ala Ser Pro Glu Phe Met Phe Pro Cys Phe
            405                 410                 415
Tyr Gly Ile Asp Val Ser Thr Thr Ala Glu Leu Ile Ser Ala Ser Lys
            420                 425                 430
Ser Pro Glu Glu Ile Lys Asn His Ile Gly Ala Asp Ser Leu Ala Tyr
        435                 440                 445
Leu Ser Val Asp Gly Leu Ile Glu Ser Ile Gly Leu Asp Tyr Asp Ala
    450                 455                 460
Pro Tyr His Gly Leu Cys Val Glu Ser Phe Thr Gly Asp Tyr Pro Ala
465                 470                 475                 480
Gly Leu Tyr Asp Tyr Glu Lys Asn Tyr Lys Lys His Leu Ser Glu Arg
            485                 490                 495
Gln Lys Ser Tyr Ile Ala Asn Asn Lys His Tyr Phe Asp Ser Glu Gly
            500                 505                 510
Asn Leu His Val
        515
```

<210> 5543
<211> 473
<212> PRT
<213> S.epidermidis

<400> 5543
Trp Arg Gly Lys Asn Met Val Val Gly Asp Phe Pro Ile Glu Thr Asp
1   5   10   15
Thr Ile Val Ile Gly Ala Gly Pro Gly Gly Tyr Val Ala Ala Ile Arg
                20   25   30
Ala Ala Gln Leu Gly Gln Lys Val Thr Ile Val Glu Lys Gly Asn Leu
            35   40   45
Gly Gly Val Cys Leu Asn Val Gly Cys Ile Pro Ser Lys Ala Leu Leu
        50   55   60
His Ala Ser His Arg Phe Val Glu Ala Gln Asn Ser Glu Asn Leu Gly
65   70   75   80
Val Ile Ala Glu Ser Val Ser Leu Asn Tyr Gln Lys Val Gln Glu Phe
                85   90   95
Lys Thr Ser Val Val Asn Lys Leu Thr Gly Gly Val Glu Gly Leu Leu
            100   105   110
Lys Gly Asn Lys Val Glu Ile Val Arg Gly Glu Ala Tyr Phe Val Asp
        115   120   125
Asn Asn Ser Leu Arg Val Met Asp Glu Lys Ser Ala Gln Thr Tyr Asn
    130   135   140
Phe Lys His Ala Ile Ile Ala Thr Gly Ser Arg Pro Ile Glu Ile Pro
145   150   155   160
Asn Phe Glu Phe Gly Lys Arg Val Ile Asp Ser Thr Gly Ala Leu Asn
                165   170   175
Leu Gln Glu Val Pro Asn Lys Leu Val Val Val Gly Gly Gly Tyr Ile
                180   185   190
Gly Ser Glu Leu Gly Thr Ala Phe Ala Asn Phe Gly Ser Glu Val Thr
            195   200   205
Ile Leu Glu Gly Ala Lys Asp Ile Leu Gly Gly Phe Glu Lys Gln Met
        210   215   220
Thr Gln Pro Val Lys Lys Gly Met Lys Glu Lys Gly Ile Glu Ile Val
225   230   235   240
Thr Glu Ala Met Ala Lys Ser Ala Glu Glu Thr Glu Asn Gly Val Lys
                245   250   255
Val Thr Tyr Glu Ala Lys Gly Glu Glu Gln Thr Ile Glu Ala Asp Tyr
                260   265   270
Val Leu Val Thr Val Gly Arg Arg Pro Asn Thr Asp Glu Leu Gly Leu
            275   280   285
Glu Glu Leu Gly Leu Lys Phe Ala Asp Arg Gly Leu Leu Glu·Val Asp
        290   295   300
Lys Gln Ser Arg Thr Ser Ile Glu Asn Ile Phe Ala Ile Gly Asp Ile
305   310   315   320
Val Pro Gly Leu Pro Leu Ala His Lys Ala Ser Tyr Glu Gly Lys Val
                325   330   335
Ala Ala Glu Ala Ile Asp Gly Gln Ala Ala Glu Val Asp Tyr Ile Gly
            340   345   350
Met Pro Ala Val Cys Phe Thr Glu Pro Glu Leu Ala Gln Val Gly Tyr
            355   360   365
Thr Glu Ala Gln Ala Lys Glu Glu Gly Leu Ser Ile Lys Ala Ser Lys
    370   375   380
Phe Pro Tyr Ala Ala Asn Gly Arg Ala Leu Ser Leu Asp Asp Thr Asn

```
385                   390                   395                   400
Gly Phe Val Lys Leu Ile Thr Leu Lys Glu Asp Asp Thr Leu Ile Gly
            405                   410                   415
Ala Gln Val Val Gly Thr Gly Ala Ser Asp Ile Ile Ser Glu Leu Gly
            420                   425                   430
Leu Ala Ile Glu Ser Gly Met Asn Ala Glu Asp Ile Ala Leu Thr Val
            435                   440                   445
His Ala His Pro Thr Leu Gly Glu Met Thr Met Glu Ala Ala Glu Lys
        450                   455                   460
Ala Ile Gly Tyr Pro Ile His Thr Met
465                   470
```

<210> 5544
<211> 63
<212> PRT
<213> S.epidermidis

```
<400> 5544
His Glu Phe Lys Met Glu Lys Cys Lys Leu Phe Phe Phe Phe Phe Ile
1                   5                   10                  15
Gln Gly Lys Asp Ile Glu Arg Asp Gly Phe Gln Ile Arg Arg Thr Thr
            20                  25                  30
Val Glu Asn Gly Val Pro Cys Leu Thr Ser Leu Asp Thr Ala Ser Ala
        35                  40                  45
Leu Thr Asn Val Ile Glu Ser Met Thr Phe Thr Met Arg Asn Val
    50                  55                  60
```

<210> 5545
<211> 46
<212> PRT
<213> S.epidermidis

```
<400> 5545
Lys Pro Pro Lys Ser Ser Val Leu Val Pro Lys Asn Ser Ala Ala Pro
1                   5                   10                  15
Ser Val Ser Asn Lys Gln Leu Thr Thr Lys Ala Met Asp Ser Cys Ile
            20                  25                  30
Leu Glu Ser Met Val Ala Tyr Leu Ile Ala Cys Ala Phe Ser
        35                  40                  45
```

<210> 5546
<211> 106
<212> PRT
<213> S.epidermidis

```
<400> 5546
Val Met Asn Lys Leu Leu Gln Ser Leu Ser Ala Leu Gly Val Ser Ala
1                   5                   10                  15
Thr Leu Val Thr Pro Asn Leu Asn Ala Glu Ala Thr Thr Asn Thr Glu
            20                  25                  30
Pro Gln Leu Lys Gly Val Asn Asp Ile Val Ile Glu Lys Gly Gln Glu
        35                  40                  45
Tyr Asn Leu Leu Lys Gly Ile Ser Ala Tyr Asp Lys Glu Asp Gly Asp
    50                  55                  60
Leu Thr His Lys Ile Lys Ile Asp Gly Gln Val Asp Thr Ser Lys Ala
65                  70                  75                  80
```

Gly Lys Tyr Lys Val Lys Tyr Gln Val Thr Asp Ser Asp Gly Ala Glu
                85   90   95
Lys Thr Ser Ile Arg Asn Ile Glu Val Lys
            100   105

<210> 5547
<211> 173
<212> PRT
<213> S.epidermidis

<400> 5547
Arg Val Asn Asn Met Ser Lys Trp Ile Ile Leu Ser Asp Asn His Lys
1   5   10   15
Glu Thr Gly Ile Leu Tyr His Ile Tyr Glu Leu His Lys Asp Ala Asp
                20   25   30
Lys Phe Leu His Leu Gly Asp Ser Glu Phe Ser Tyr Asn Asp Thr Glu
            35   40   45
Leu Ser Leu Tyr Gln Arg Val Lys Gly Asn Cys Asp Phe Tyr Pro Glu
        50   55   60
Phe Leu Glu Glu Glu Ile Thr Glu Glu Asn Gly Ile Arg Ala Phe Tyr
65   70   75   80
Thr His Gly His Leu Tyr Gln Val Asn Gln Thr Arg Met Lys Leu Ala
                85   90   95
Glu Lys Ala Lys Glu Leu Gly Cys Leu Phe Ala Phe Tyr Gly His Thr
            100   105   110
His Val Ala Lys Tyr Glu Gln Ile Gly Gly Ile His Val Ile Asn Pro
        115   120   125
Gly Ser Ile Ser Gln Ser Arg Ser Gln Ile Glu Glu Thr Phe Ala Glu
        130   135   140
Leu Val Tyr Lys Glu Asp Glu Asn Thr Ile Ile Leu Asn Phe Arg Asn
145   150   155   160
Arg Glu Asn Gln Ile Ile Glu Thr Val Lys Ile Glu Phe
                165   170

<210> 5548
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5548
Ile Tyr Leu Asn Leu Tyr Gln Leu Leu Thr Ile Asn Gly Tyr Leu Asn
1   5   10   15
Asp Ala His Glu Ile Ile Asn Ile Tyr Lys Val Phe Ile Leu Thr Val
                20   25   30
Leu Ser Ile Tyr Glu Cys His Phe Glu Asn
        35   40

<210> 5549
<211> 81
<212> PRT
<213> S.epidermidis

<400> 5549
Leu Leu Leu Asn Val Thr Phe Lys Leu Asp Lys Glu Phe Leu Ser Asp
1   5   10   15
Phe Lys Leu Val Leu Tyr Ala Ile Gln Leu Phe Tyr Asn Leu Leu Val

```
                    20                        25                        30
Ile Lys Lys Pro Arg Thr Ile Phe Met Ser Gln Ala Leu Pro Ile Leu
            35                        40                        45
Ile Lys Leu Tyr Pro Lys Tyr Ser Phe Gly Thr Thr Gly Ser Ile Leu
        50                        55                        60
Pro Ser Ala Ile Ser Ser Lys Ala Phe Pro Thr Gly Leu Ala Glu Trp
65                        70                        75                        80
Tyr
```

<210> 5550
<211> 334
<212> PRT
<213> S.epidermidis

<400> 5550

```
Lys Glu Leu Lys Leu Glu Ser Glu Glu Lys Glu Ile Tyr Met Ile Phe
1                   5                        10                        15
Ile Tyr Ala Ile Ile Ala Leu Leu Ile Thr Phe Ile Leu Val Pro Ile
                20                        25                        30
Leu Ile Pro Thr Leu Lys Arg Met Lys Phe Gly Gln Ser Ile Arg Glu
            35                        40                        45
Glu Gly Pro Gln Ser His Met Lys Lys Thr Gly Thr Pro Thr Met Gly
        50                        55                        60
Gly Leu Thr Phe Leu Ile Ser Ile Ile Ile Thr Ser Ile Ile Ala Ile
65                        70                        75                        80
Ile Phe Val Asp His Ser Asn Pro Ile Ile Leu Leu Leu Phe Val Thr
                    85                        90                        95
Ile Gly Phe Gly Leu Ile Gly Phe Ile Asp Asp Tyr Ile Ile Val Val
                100                        105                        110
Lys Lys Asn Asn Gln Gly Leu Thr Ser Lys Gln Lys Phe Leu Ala Gln
            115                        120                        125
Ile Ile Ile Ala Val Ile Phe Phe Val Leu Ser Asp Val Phe His Leu
            130                        135                        140
Val His Phe Thr Thr Asp Leu His Ile Pro Phe Val Asn Phe Asp Ile
145                        150                        155                        160
Pro Leu Ser Phe Ala Tyr Val Ile Phe Ile Val Phe Trp Gln Val Gly
                165                        170                        175
Phe Ser Asn Ala Val Asn Leu Thr Asp Gly Leu Asp Gly Leu Ala Thr
                180                        185                        190
Gly Leu Ser Ile Ile Gly Phe Ala Met Tyr Ala Val Met Ser Tyr Met
                195                        200                        205
Leu Asp Ser Pro Ala Ile Gly Ile Phe Cys Ile Ile Met Ile Phe Ala
            210                        215                        220
Leu Leu Gly Phe Leu Pro Tyr Asn Leu Asn Pro Ala Lys Val Phe Met
225                        230                        235                        240
Gly Asp Thr Gly Ser Leu Ala Leu Gly Gly Ile Phe Ala Thr Ile Ser
                245                        250                        255
Ile Met Leu Asn Gln Glu Leu Ser Leu Ile Leu Ile Gly Phe Val Phe
                260                        265                        270
Val Val Glu Thr Leu Ser Val Met Leu Gln Val Ala Ser Tyr Lys Leu
            275                        280                        285
Thr Lys Lys Arg Ile Phe Lys Met Ser Pro Ile His His His Phe Glu
            290                        295                        300
Leu Ser Gly Trp Gly Glu Trp Lys Val Val Thr Val Phe Trp Thr Val
305                        310                        315                        320
```

```
Gly Leu Ile Thr Gly Leu Ile Gly Leu Trp Ile Gly Val His
            325                     330
```

<210> 5551
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5551
```
Phe Leu Ile Asn Ser Lys Asp Gln Leu Ser His Ile Asn Lys Thr Ser
1               5                   10                  15
Leu Gln His Met Tyr Ser Tyr Val Gln Thr Leu His Leu Leu Gln Gly
            20                  25                  30
Phe Phe His Phe Asn Gln Ile Ile Ile
            35                  40
```

<210> 5552
<211> 356
<212> PRT
<213> S.epidermidis

<400> 5552
```
Leu Ile Ile Asn Ile Ile Leu Ile Val Arg Glu Ile Tyr Met Ser Lys
1               5                   10                  15
Ala Tyr Glu Glu Ser Gly Val Asn Ile Gln Ala Gly Tyr Glu Ala Val
            20                  25                  30
Glu Arg Ile Thr Ser His Val Glu Arg Thr Leu Arg Lys Glu Val Leu
            35                  40                  45
Gly Gly Leu Gly Gly Phe Gly Ala Thr Phe Asp Leu Ser Gln Leu Lys
            50                  55                  60
Met Lys Ala Pro Val Leu Val Ser Gly Thr Asp Gly Val Gly Thr Lys
65                  70                  75                  80
Leu Lys Leu Ala Ile Asp Tyr Gly Lys His Asp Thr Ile Gly Ile Asp
                85                  90                  95
Ala Val Ala Met Cys Val Asn Asp Ile Leu Thr Thr Gly Ala Glu Pro
                100                 105                 110
Leu Tyr Phe Leu Asp Tyr Ile Ala Thr Asn Lys Val Val Pro Ser Thr
            115                 120                 125
Ile Glu Gln Ile Val Lys Gly Ile Ser Asp Gly Cys Glu Gln Thr Asn
            130                 135                 140
Thr Ala Leu Ile Gly Gly Glu Thr Ala Glu Met Gly Glu Met Tyr His
145                 150                 155                 160
Glu Gly Glu Tyr Asp Ile Ala Gly Phe Ala Val Gly Ala Val Glu Lys
                165                 170                 175
Glu Asp Tyr Ile Asp Gly Ser Asn Val Glu Glu Gly Gln Ala Ile Ile
                180                 185                 190
Gly Leu Ala Ser Ser Gly Ile His Ser Asn Gly Tyr Ser Leu Val Arg
            195                 200                 205
Lys Met Ile Lys Glu Ser Gly Val Gln Leu His Asp Gln Phe Asn Gly
            210                 215                 220
Gln Thr Phe Leu Glu Thr Phe Leu Ala Pro Thr Lys Leu Tyr Val Lys
225                 230                 235                 240
Pro Ile Leu Glu Leu Lys Lys His Ile Asp Ile Lys Ala Met Ser His
                245                 250                 255
Ile Thr Gly Gly Gly Phe Tyr Glu Asn Ile Pro Arg Ala Leu Pro Lys
                260                 265                 270
```

```
Gly Leu Ser Ala Lys Ile Asp Thr Gln Ser Phe Pro Thr Leu Glu Val
        275                 280                 285
Phe Asn Trp Leu Gln Lys Gln Gly Asn Ile Ser Thr Asn Glu Met Tyr
        290                 295                 300
Asn Ile Phe Asn Met Gly Ile Gly Tyr Thr Ile Ile Val Asp Lys Lys
305                 310                 315                 320
Asp Val Gln Thr Thr Leu Thr Thr Leu Arg Ala Met Asp Thr Thr Ala
        325                 330                 335
Tyr Glu Ile Gly Glu Ile Ile Lys Asp Asp Asp Thr Pro Ile His Leu
        340                 345                 350
Leu Glu Val Glu
        355


<210> 5553
<211> 42
<212> PRT
<213> S.epidermidis


<400> 5553
Ile Glu Ile Asn Leu Ser Glu Phe Val Phe Asp Val Asn Ile Leu Thr
1               5                   10                  15
Tyr Phe Ser Asn Phe Glu Gln Leu Tyr Lys Ile Ile Ile Glu Tyr Phe
            20                  25                  30
Phe Cys Phe Gln Asn Asn Asn His Thr Phe
            35                  40


<210> 5554
<211> 48
<212> PRT
<213> S.epidermidis


<400> 5554
Gly Glu Ile Asn Met Ser Lys Leu Ala Glu Ala Ile Ala Asn Thr Val
1               5                   10                  15
Lys Ala Ala Gln Asp Gln Asp Trp Thr Lys Leu Gly Thr Ser Ile Val
            20                  25                  30
Asp Ile Val Glu Ser Gly Val Ser Val Leu Gly Lys Ile Phe Gly Phe
            35                  40                  45


<210> 5555
<211> 48
<212> PRT
<213> S.epidermidis


<400> 5555
Gly Glu Ile Asn Met Ser Lys Leu Ala Glu Ala Ile Ala Asn Thr Val
1               5                   10                  15
Lys Ala Ala Gln Asp Gln Asp Trp Thr Lys Leu Gly Thr Ser Ile Val
            20                  25                  30
Asp Ile Val Glu Ser Gly Val Ser Val Leu Gly Lys Ile Phe Gly Phe
            35                  40                  45


<210> 5556
<211> 43
<212> PRT
<213> S.epidermidis
```

<400> 5556

Asn Leu Val Lys Leu Leu Glu Phe Asn Lys Tyr Asn Ala His Asn Lys
1   5   10   15
Asn Ile Leu Met Trp Arg Ile Asn Phe Lys Thr Leu Lys Val Arg Pro
            20   25   30
Leu Arg Ser Phe Leu Val Thr Thr Thr Tyr Phe
            35   40

<210> 5557
<211> 1037
<212> PRT
<213> S.epidermidis

<400> 5557

Arg Ile Ser Lys Lys Arg Ser Val Lys Ser Met Pro Lys Arg Asp Asp
1   5   10   15
Ile Lys Thr Ile Leu Val Val Gly Ser Gly Pro Ile Ile Ile Gly Gln
            20   25   30
Ala Ala Glu Phe Asp Tyr Ala Gly Thr Gln Ala Cys Leu Ala Leu Lys
            35   40   45
Glu Glu Gly Tyr Arg Val Ile Leu Val Asn Ser Asn Pro Ala Thr Ile
    50   55   60
Met Thr Asp Lys Glu Ile Ala Asp Lys Val Tyr Ile Glu Pro Leu Thr
65   70   75   80
His Asp Phe Ile Ala Arg Ile Ile Arg Lys Glu Gln Pro Asp Ala Leu
                85   90   95
Leu Pro Thr Leu Gly Gly Gln Thr Gly Leu Asn Met Ala Ile Gln Leu
            100   105   110
His Asp Ser Gly Val Leu Glu Ala Asn Asn Val Lys Leu Leu Gly Thr
            115   120   125
Glu Leu Glu Ser Ile Gln Gln Ala Glu Asp Arg Glu Met Phe Arg Thr
    130   135   140
Leu Met Asn Asp Leu Asn Val Pro Val Pro Glu Ser Asp Ile Val Asn
145   150   155   160
Thr Val Glu Gln Ala Phe Glu Phe Lys Glu Gln Val Gly Tyr Pro Leu
                165   170   175
Ile Val Arg Pro Ala Phe Thr Met Gly Gly Thr Gly Gly Gly Ile Cys
            180   185   190
His Asn Asp Ala Glu Leu Lys Glu Val Val Ser Asn Gly Leu His Tyr
            195   200   205
Ser Pro Ala Thr Gln Cys Leu Ile Glu Lys Ser Ile Ala Gly Tyr Lys
    210   215   220
Glu Ile Glu Tyr Glu Val Met Arg Asp Lys Asn Asp Asn Ala Ile Val
225   230   235   240
Val Cys Asn Met Glu Asn Ile Asp Pro Val Gly Ile His Thr Gly Asp
                245   250   255
Ser Ile Val Val Ala Pro Ser Gln Thr Leu Ser Asp Val Glu Tyr Gln
            260   265   270
Met Leu Arg Asp Val Ser Leu Lys Val Ile Arg Ala Leu Gly Ile Glu
            275   280   285
Gly Gly Cys Asn Val Gln Leu Ala Leu Asp Pro His Ser Leu Asn Tyr
    290   295   300
Tyr Ile Ile Glu Val Asn Pro Arg Val Ser Arg Ser Ser Ala Leu Ala
305   310   315   320
Ser Lys Ala Thr Gly Tyr Pro Ile Ala Lys Leu Ala Ala Lys Ile Ala

```
                325                    330                    335
Val Gly Leu Thr Leu Asp Glu Met Leu Asn Pro Ile Thr Gly Thr Ser
        340                    345                    350
Tyr Ala Ala Phe Glu Pro Thr Leu Asp Tyr Val Ile Ser Lys Ile Pro
        355                    360                    365
Arg Phe Pro Phe Asp Lys Phe Glu Lys Gly Glu Arg Glu Leu Gly Thr
        370                    375                    380
Gln Met Lys Ala Thr Gly Glu Val Met Ala Ile Gly Arg Thr Tyr Glu
385                    390                    395                    400
Glu Ser Leu Leu Lys Ala Ile Arg Ser Leu Glu Tyr Gly Val His His
                405                    410                    415
Leu Gly Leu Pro Asn Gly Glu Ser Tyr Glu Leu Asp Tyr Ile Lys Glu
                420                    425                    430
Arg Ile Gly His Gln Asp Asp Glu Arg Leu Phe Phe Ile Gly Glu Ala
        435                    440                    445
Ile Arg Arg Gly Thr Ser Leu Glu Glu Leu His Asn Met Thr Lys Ile
        450                    455                    460
Asp Tyr Phe Phe Leu Asn Lys Phe Gln Asn Ile Ile Asp Ile Glu His
465                    470                    475                    480
Glu Leu Lys Asn His Gln Gly Asp Leu Glu Tyr Leu Lys Tyr Ala Lys
                485                    490                    495
Asp Tyr Gly Phe Ser Asp Lys Val Ile Ala His Arg Trp Asp Lys Glu
        500                    505                    510
Glu Lys Asp Ile Tyr Gln Leu Arg Met Ser Gln Asn Ile Lys Pro Val
        515                    520                    525
Tyr Lys Met Val Asp Thr Cys Ala Ala Glu Phe Glu Ser Thr Thr Pro
        530                    535                    540
Tyr Tyr Tyr Gly Thr Tyr Glu Tyr Glu Asn Glu Ser Ile Val Thr Asp
545                    550                    555                    560
Lys Glu Lys Ile Leu Val Leu Gly Ser Gly Pro Ile Arg Ile Gly Gln
                565                    570                    575
Gly Val Glu Phe Asp Tyr Ala Thr Val His Ala Val Trp Ala Ile Gln
        580                    585                    590
Asn Ala Asp Tyr Glu Ala Ile Ile Val Asn Asn Asn Pro Glu Thr Val
        595                    600                    605
Ser Thr Asp Phe Ser Ile Ser Asp Lys Leu Tyr Phe Glu Pro Leu Thr
        610                    615                    620
Glu Glu Asp Val Met Asn Ile Ile Asn Leu Glu Gln Pro Lys Gly Val
625                    630                    635                    640
Val Val Gln Phe Gly Gly Gln Thr Ala Ile Asn Leu Ala Asp Lys Leu
        645                    650                    655
Ala Gln His Gly Val Lys Ile Leu Gly Thr Ser Leu Glu Asp Leu Asn
        660                    665                    670
Arg Ala Glu Asp Arg Lys Glu Phe Glu Ala Leu Leu Arg Glu Ile Ala
        675                    680                    685
Val Pro Gln Pro Gln Gly Lys Thr Ala Thr Ser Pro Lys Glu Ala Leu
        690                    695                    700
Glu Asn Ala Arg Glu Ile Gly Tyr Pro Val Val Val Arg Pro Ser Tyr
705                    710                    715                    720
Val Leu Gly Gly Arg Ala Met Glu Ile Val Asp Asn Asp Gln Glu Leu
        725                    730                    735
Glu Asn Tyr Met Thr Gln Ala Val Lys Ala Ser Pro Glu His Pro Val
        740                    745                    750
Leu Val Asp Arg Tyr Leu Thr Gly Lys Glu Ile Glu Val Asp Ala Ile
        755                    760                    765
Ser Asp Gly Glu Thr Val Val Ile Pro Gly Ile Met Glu His Ile Glu
```

```
        770                    775                    780
Arg Ala Gly Val His Ser Gly Asp Ser Ile Ala Val Tyr Pro Pro Gln
785                    790                    795                    800
Thr Leu Thr Gln Asp Glu Ile Asn Thr Leu Glu Asp Tyr Thr Ile Lys
                805                    810                    815
Leu Ala Lys Gly Leu Asn Ile Lys Gly Leu Ile Asn Ile Gln Phe Val
                820                    825                    830
Ile Ala His Asp Gly Val Tyr Val Leu Glu Val Asn Pro Arg Ser Ser
                835                    840                    845
Arg Thr Val Pro Phe Leu Ser Lys Ile Thr Asp Ile Gln Met Ala Gln
        850                    855                    860
Leu Ala Met Arg Ala Ile Met Gly Glu Thr Leu Ala Glu Ile Gly Phe
865                    870                    875                    880
Lys Gln Gly Ile Gln Pro Tyr Ser Glu Gly Val Tyr Val Lys Ala Pro
                885                    890                    895
Val Phe Ser Phe Asn Lys Leu Lys Asn Val Asp Ile Thr Leu Gly Pro
                900                    905                    910
Glu Met Lys Ser Thr Gly Glu Val Met Gly Lys Asp Leu Thr Leu Glu
                915                    920                    925
Lys Ala Leu Tyr Lys Gly Leu Thr Gly Ser Gly Phe Glu Val Lys Asp
        930                    935                    940
His Gly Thr Val Leu Met Thr Val Ser Asp Lys Asp Lys Asp Glu Ile
945                    950                    955                    960
Val Lys Ile Ala His Arg Leu Asn Glu Ile Gly Tyr Lys Ile Leu Ala
                965                    970                    975
Thr Arg Gly Thr Ala Gln Lys Leu Lys Asp His Asn Ile Pro Val Glu
                980                    985                    990
Val Val Gly Lys Ile Gly Gly Glu Asp Asp Leu Leu Thr Arg Ile Gln
        995                    1000                    1005
Asn Gly Glu Val Gln Ile Val Phe Phe Phe Phe Tyr Ser Arg Lys Arg
        1010                    1015                    1020
Tyr Arg Thr Arg Trp Ile Pro Asn Ser Thr Tyr Asn Ser
1025                    1030                    1035
```

<210> 5558
<211> 318
<212> PRT
<213> S.epidermidis

<400> 5558
```
Lys Ser Thr Lys Lys Glu Arg Ile Gln Leu Met Gly Asn Val Val Tyr
1                    5                    10                    15
Lys Leu Thr Ser Lys Glu Ile Gln Ser Leu Met Ala Gln Thr Thr Phe
                20                    25                    30
Glu Thr Thr Lys Leu Pro Gln Gly Met Lys Ala Arg Thr Arg Tyr Gln
        35                    40                    45
Asn Thr Val Ile Asn Ile Tyr Ser Ser Gly Lys Val Met Phe Gln Gly
        50                    55                    60
Lys Asn Ala Asp Gln Leu Ala Ser Gln Leu Leu Pro Asp Lys Gln Ser
65                    70                    75                    80
Thr Thr Gly Lys His Thr Ser Ser Asn Thr Thr Ser Ile Gln Tyr Asn
                85                    90                    95
Arg Phe His Cys Ile Gly Ser Asp Glu Ala Gly Ser Gly Asp Tyr Phe
                100                    105                    110
Gly Pro Leu Thr Val Cys Ala Ala Tyr Val Ser Gln Ser His Ile Lys
        115                    120                    125
```

```
Ile Leu Lys Glu Leu Gly Val Asp Asp Ser Lys Lys Leu Asn Asp Thr
    130             135             140
Lys Ile Val Asp Leu Ala Glu Gln Leu Ile Thr Phe Ile Pro His Ser
145             150             155             160
Leu Leu Thr Leu Asp Asn Val Lys Tyr Asn Glu Arg Gln Ser Ile Gly
            165             170             175
Trp Ser Gln Val Lys Met Lys Ala Val Leu His Asn Glu Ala Ile Lys
            180             185             190
Asn Val Leu Gln Lys Ile Glu Gln Asp Gln Leu Asp Tyr Ile Val Ile
            195             200             205
Asp Gln Phe Ala Lys Arg Glu Val Tyr Gln His Tyr Ala Leu Ser Ala
    210             215             220
Leu Pro Phe Pro Asp Lys Thr Lys Phe Glu Thr Lys Gly Glu Ser Lys
225             230             235             240
Ser Leu Ala Ile Ala Ala Ala Ser Ile Ile Ser Arg Tyr Ala Phe Val
            245             250             255
Lys His Met Asp His Ile Ser Lys Lys Leu His Met Glu Ile Pro Lys
            260             265             270
Gly Ala Ser Asn Lys Val Asp Leu Ile Ala Ala Lys Val Ile Gln Lys
            275             280             285
Tyr Asp Ile Gln Gln Leu Asp Thr Ile Ser Lys Lys His Phe Lys Asn
    290             295             300
Arg Asp Lys Ala Ile His Leu Met Asn Gln Lys Tyr Asn Lys
305             310             315
```

<210> 5559
<211> 56
<212> PRT
<213> S.epidermidis

<400> 5559

```
Met Lys Ala Lys Pro Lys Met Ile Val Thr Leu Ala Trp Asn Val Ile
1               5               10              15
Leu Val Tyr Arg Val Thr Lys Thr Ala Lys Ser Val Ser Thr Ile Glu
            20              25              30
Ala Ile Lys Pro Thr Val Cys Phe Thr Ile Val Phe Ile Arg Tyr Thr
            35              40              45
Pro Ser Leu Ser Tyr Ile Arg Gln
    50              55
```

<210> 5560
<211> 338
<212> PRT
<213> S.epidermidis

<400> 5560

```
Arg Arg Ala Asn Val Met Ala Phe Glu Gly Leu Ser Asp Arg Leu Gln
1               5               10              15
Ala Thr Met Gln Lys Met Arg Gly Lys Gly Lys Val Thr Glu Ala Asp
            20              25              30
Ile Lys Thr Met Met Arg Glu Val Arg Leu Ala Leu Leu Glu Ala Asp
            35              40              45
Val Asn Phe Lys Val Val Lys Glu Phe Val Lys Asn Val Ser Glu Arg
    50              55              60
Ala Leu Gly Ser Asp Val Met Gln Ser Leu Thr Pro Gly Gln Gln Val
65              70              75              80
```

```
Ile Lys Ile Val Gln Glu Glu Leu Thr Ser Leu Met Gly Gly Glu Asn
                85                      90                      95
Thr Ser Ile Lys Met Ala Asn Lys Pro Pro Thr Val Val Met Met Val
               100                     105                 110
Gly Leu Gln Gly Ala Gly Lys Thr Thr Thr Ala Gly Lys Leu Ala Leu
           115                 120                 125
Leu Met Arg Lys Lys Tyr Asn Lys Lys Pro Leu Leu Val Ala Gly Asp
       130                 135                 140
Ile Tyr Arg Pro Ala Ala Ile Asp Gln Leu Gln Thr Val Gly Lys Gln
145                 150                 155                     160
Ile Asp Ile Pro Val Tyr Ser Glu Gly Asp Gln Val Ser Pro Gln Gln
               165                 170                     175
Ile Val Glu Asn Ala Leu Lys His Ala Lys Glu Glu His Leu Asp Phe
               180                 185                 190
Val Ile Ile Asp Thr Ala Gly Arg Leu His Ile Asp Glu Ala Leu Met
           195                 200                 205
Asn Glu Leu Gln Glu Val Lys Glu Ile Ser Lys Pro Asp Glu Ile Met
       210                 215                 220
Leu Val Val Asp Ala Met Thr Gly Gln Asp Ala Val Asn Val Ala Gln
225                 230                 235                     240
Ser Phe Asp Glu Gln Leu Asp Val Ser Gly Val Thr Leu Thr Lys Leu
               245                 250                 255
Asp Gly Asp Thr Arg Gly Gly Ala Ala Leu Ser Ile Arg Ser Val Thr
           260                 265                 270
Gln Lys Pro Ile Lys Phe Val Gly Met Ser Glu Lys Leu Asp Gly Leu
           275                 280                 285
Glu Leu Phe His Pro Glu Arg Met Ala Ser Arg Ile Leu Gly Met Gly
       290                 295                 300
Asp Val Leu Ser Leu Ile Glu Lys Ala Gln Gln Asp Val Asp Gln Glu
305                 310                 315                     320
Lys Ala Lys Asp Leu Glu Lys Lys Met Arg Glu Ser Ser Ser Ser Leu
               325                 330                 335
Asn Leu


<210> 5561
<211> 138
<212> PRT
<213> S.epidermidis

<400> 5561
Arg Phe Lys Asn Lys Thr Leu Lys Phe Ser Gly Gly Thr Asp Met Thr
1               5                   10                  15
Leu Glu Ile Ser Asn Asp Tyr Gly Lys Ile Asp Ile Ser Asn Asp Val
               20                  25                  30
Ile Ala Ser Val Val Gly Gly Lys Ala Val Glu Ser Tyr Gly Ile Val
           35                  40                  45
Gly Met Ala Ser Arg Gln Gln Val Arg Asp Gly Ile Ala Glu Ile Leu
       50                  55                  60
Gly His Asp Asn Tyr Ala Lys Gly Ile Lys Val Arg Glu Asp Asn Gly
65                  70                  75                      80
Ile Ile Asp Val Asp Met Tyr Ile Ile Val Ser Tyr Gly Val Lys Ile
               85                  90                  95
Ser Glu Val Ala Ser Asn Leu Gln Ser Thr Val Lys Tyr Thr Leu Glu
               100                 105                 110
Lys Thr Leu Asn Val Lys Val Asn Ser Ile Asn Ile Phe Val Gln Gly
```

```
              115                    120                      125
Val Arg Val Asn Glu Thr Val Lys Lys Val
    130                    135


<210> 5562
<211> 46
<212> PRT
<213> S.epidermidis


<400> 5562
Glu Ile Lys Lys Ser Ser Lys Ser Gln Tyr Arg Phe Thr Arg Phe Lys
1                   5                   10                   15
Asp Val Lys Tyr Tyr Leu Asp Ser Phe Leu Cys Arg Leu Ser Asn Lys
            20                  25                  30
Ser Glu Asp Ile Lys Ala Ile Glu Pro Asn Thr Val Val Val
        35                  40                  45


<210> 5563
<211> 41
<212> PRT
<213> S.epidermidis


<400> 5563
Glu Ala Lys Asn Phe Thr Gln Pro Phe Ser Phe His Phe Pro Ile His
1                   5                   10                   15
Gly Phe Lys Asn Pro Thr Tyr Tyr Lys Arg Ile Ser Lys Gly Glu Ser
            20                  25                  30
Lys Ala Asp Leu Phe Phe Ile Arg Ile
        35                  40


<210> 5564
<211> 203
<212> PRT
<213> S.epidermidis


<400> 5564
Met Ala Lys Asn Ile Ala Lys Ala Leu Leu Asp Ile Glu Ala Val Ser
1                   5                   10                   15
Leu Ser Pro Asn Asp Leu Phe Thr Trp Ser Ser Gly Ile Lys Ser Pro
            20                  25                  30
Ile Tyr Cys Asp Asn Arg Ile Thr Leu Gly Tyr Pro Glu Val Arg Asn
        35                  40                  45
Ala Ile Arg Asp Gly Leu Ile Gln Leu Ile Lys Glu His Phe Ser Asn
    50                  55                  60
Val Glu Ile Ile Ser Gly Thr Ala Thr Ala Gly Ile Pro His Ala Ala
65                  70                  75                  80
Tyr Ile Ser Glu Lys Leu Glu Leu Pro Met Asn Tyr Val Arg Ser Lys
                85                  90                  95
Ser Lys Ser His Gly Lys Gln Asn Gln Ile Glu Gly Ala Lys Ser Glu
            100                 105                 110
Asn Lys Asn Val Val Val Val Glu Asp Leu Ile Ser Thr Gly Gly Ser
            115                 120                 125
Ser Ile Thr Ala Val Glu Ala Leu Glu Glu Ala Gly Ala Asn Val Leu
        130                 135                 140
Gly Val Val Ala Ile Phe Thr Tyr Gly Leu Ala Lys Ala Asp Lys Thr
145                 150                 155                 160
```

Phe Asn Lys Ala His Ile Pro Phe Tyr Thr Leu Ser Asp Tyr Asn Glu
                165   170   175
Leu Ile Glu Val Ala Lys Asp Glu Gly Lys Ile Ser Leu Asn Asp Ile
                180   185   190
Gln Thr Leu Val Asp Trp Arg Asp Asn Leu Ser
            195   200

<210> 5565
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5565
Tyr Asn Lys Lys Phe Leu His Val Ser Val Tyr Phe Lys Lys Ile Asn
1   5   10   15
Phe Lys Leu Leu Ile Lys Tyr Asn Lys Lys Ala Gln Asn Glu Phe His
                20   25   30
Phe Gly Leu Ile Phe Val Lys Leu
            35   40

<210> 5566
<211> 373
<212> PRT
<213> S.epidermidis

<400> 5566
Gln Asp Lys Lys Lys Gly Lys Leu Glu Met Ile Thr Ala Glu Lys Lys
1   5   10   15
Lys Arg Asn Lys Phe Leu Pro Asn Phe Glu Lys Gln Ser Ile Tyr Ser
                20   25   30
Leu Arg Tyr Asp Glu Met Gln Gln Trp Leu Ile Asp His Gly Gln Gln
            35   40   45
Lys Phe Arg Ala Lys Gln Ile Phe Glu Trp Leu Tyr Gln Lys Arg Val
        50   55   60
Asn Thr Ile Asp Glu Met Thr Asn Leu Ser Lys Glu Leu Arg Gln Ile
65   70   75   80
Leu Lys Asp His Phe Ala Met Thr Thr Leu Thr Thr Val Val Lys Gln
                85   90   95
Glu Ser Lys Asp Gly Thr Ile Lys Phe Leu Phe Glu Leu Gln Asp Gly
            100   105   110
Tyr Thr Ile Glu Thr Val Leu Met Arg His Glu Tyr Gly Asn Ser Val
            115   120   125
Cys Val Thr Thr Gln Val Gly Cys Arg Ile Gly Cys Thr Phe Cys Ala
        130   135   140
Ser Thr Leu Gly Gly Leu Lys Arg Asn Leu Glu Ala Gly Glu Ile Val
145   150   155   160
Ser Gln Val Leu Thr Val Gln Lys Ala Leu Asp Glu Thr Asn Glu Arg
                165   170   175
Val Ser Gln Ile Val Ile Met Gly Ile Gly Glu Pro Phe Glu Asn Tyr
                180   185   190
Asp Glu Met Met Asp Phe Leu Arg Ile Val Asn Asp Asp Asn Ser Leu
            195   200   205
Asn Ile Gly Ala Arg His Ile Thr Val Ser Thr Ser Gly Ile Ile Pro
        210   215   220
Arg Ile Tyr Asp Phe Ala Glu Glu Asp Ile Gln Ile Asn Phe Ala Val
225   230   235   240

Ser Leu His Gly Ala Lys Asp Glu Ile Arg Ser Arg Leu Met Pro Ile
            245   250   255
Asn Arg Ala Tyr Asn Val Asp Lys Leu Met Glu Ala Ile Arg Tyr Tyr
            260   265   270
Gln Glu Lys Thr Asn Arg Arg Val Thr Phe Glu Tyr Gly Leu Phe Gly
            275   280   285
Gly Val Asn Asp Gln Leu Glu His Ala Arg Asp Leu Ala His Leu Ile
            290   295   300
Lys Asn Leu Asn Cys His Val Asn Leu Ile Pro Val Asn His Val Pro
305   310   315   320
Glu Arg Asn Tyr Val Lys Thr Pro Lys Asp Asp Ile Phe Lys Phe Glu
            325   330   335
Lys Glu Leu Lys Arg Leu Gly Ile Asn Ala Thr Ile Arg Arg Glu Gln
            340   345   350
Gly Ser Asp Ile Asp Ala Ala Cys Gly Gln Leu Arg Ala Lys Glu Arg
            355   360   365
Gln Val Glu Thr Arg
    370

<210> 5567
<211> 74
<212> PRT
<213> S.epidermidis

<400> 5567
Lys Ile Lys Lys Glu Pro His Ser Met Arg Leu Leu Phe Val Ile Ala
1   5   10   15
Ser Trp Glu Gly Phe Glu Pro Pro Thr Asp Gly Leu Glu Gly His Cys
            20   25   30
Ser Ile Gln Leu Ser Tyr Gln Asp Ile Phe Asn Thr Arg Ile Ile Ile
            35   40   45
Ser Lys Tyr Met Ser Phe Ser Asn Arg Tyr Leu Ile Lys Ile Ile Tyr
            50   55   60
Ile Phe His Tyr Asn Arg Gly Phe Tyr Thr
65   70

<210> 5568
<211> 408
<212> PRT
<213> S.epidermidis

<400> 5568
Tyr Met Lys Asn Phe Lys Asn Ile Met Arg Tyr Ile Gly Lys Thr Ser
1   5   10   15
Lys Phe Ile Asp Tyr Pro Leu Leu Ile Thr Tyr Val Val Leu Cys Leu
            20   25   30
Ile Gly Leu Val Met Val Tyr Ser Ala Ser Met Val Ala Ala Thr Lys
            35   40   45
Gly Thr Leu Thr Gly Gly Val Pro Val Ser Gly Thr Tyr Phe Tyr Asn
            50   55   60
Arg Gln Leu Leu Tyr Val Ile Met Ser Phe Val Ile Val Phe Phe Met
65   70   75   80
Ala Phe Ile Met Asn Val Lys Val Leu Lys Lys Pro Asn Val Gln Lys
                85   90   95
Gly Met Met Ile Gly Ile Phe Ile Leu Leu Leu Thr Leu Val Ile
            100   105   110

```
Gly Lys Asn Ile Asn Gly Ser Lys Ser Trp Ile Asn Leu Gly Phe Met
        115                 120                 125
Asn Leu Gln Ala Ser Glu Leu Leu Lys Ile Ser Ile Ile Leu Tyr Ile
        130                 135                 140
Pro Phe Met Ile Glu Lys Lys Met Pro Ala Val Arg His Asn Ile Lys
145                 150                 155                 160
Leu Ile Leu Gly Pro Ile Leu Phe Val Val Thr Cys Leu Ile Leu Val
                165                 170                 175
Leu Phe Gln Lys Asp Val Gly Gln Thr Met Leu Ile Val Ile Ile Phe
                180                 185                 190
Phe Ser Ile Ile Phe Tyr Ser Gly Ile Gly Val Gln Asn Met Leu Lys
        195                 200                 205
Trp Gly Ala Leu Val Ala Ile Gly Phe Ile Ile Val Ala Thr Phe Met
        210                 215                 220
Phe Met Leu Asp Met Val Pro Ser Tyr Leu Gln Ala Arg Phe Ser Thr
225                 230                 235                 240
Leu Thr Asn Pro Phe Ser Gln Glu Ser Gly Thr Gly Tyr His Ile Ser
                245                 250                 255
Asn Ser Leu Leu Ala Ile Gly Asn Gly Gly Leu Phe Gly Arg Gly Leu
                260                 265                 270
Gly Asn Ser Ile Met Lys Leu Gly Tyr Leu Pro Glu Pro His Thr Asp
                275                 280                 285
Phe Ile Phe Ala Ile Ile Cys Glu Glu Met Gly Leu Ile Gly Gly Leu
        290                 295                 300
Ile Val Leu Ile Leu Glu Tyr Phe Ile Val Tyr Arg Ala Phe Gln Leu
305                 310                 315                 320
Ala Asn Lys Thr Gln Ser Tyr Phe Tyr Lys Leu Val Cys Val Gly Ile
                325                 330                 335
Ala Ser Tyr Ile Gly Ser Gln Thr Phe Val Asn Ile Gly Gly Ile Ser
                340                 345                 350
Ala Thr Ile Pro Leu Thr Gly Val Pro Leu Pro Phe Ile Ser Phe Gly
                355                 360                 365
Gly Ser Ser Met Ile Ser Leu Ser Ile Ala Met Gly Leu Leu Leu Ile
        370                 375                 380
Thr Ala Lys Gln Ile Lys Gln Asp Asp Lys Arg Leu Lys Gln Arg Lys
385                 390                 395                 400
Val Asp Ile Lys Arg Arg Tyr Asn
                405
```

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<210> 5569
<211> 366
<212> PRT
<213> S.epidermidis
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<400> 5569
Met Leu Glu Lys Arg Tyr Leu Val Leu Glu Asp Gly Ser Tyr Tyr Glu
1               5                   10                  15
Gly Tyr Arg Leu Gly Ser Asp Asp Leu Ser Ile Gly Glu Ile Val Phe
        20                  25                  30
Asn Thr Ala Met Thr Gly Tyr Gln Glu Thr Ile Ser Asp Pro Ser Tyr
        35                  40                  45
Thr Gly Gln Ile Ile Thr Phe Thr Tyr Pro Leu Ile Gly Asn Tyr Gly
        50                  55                  60
Ile Asn Arg Asp Asp Phe Glu Ser Leu Thr Pro Lys Leu Asn Gly Val
65                  70                  75                  80
Val Val Lys Glu Ala Ser Thr His Pro Ser Asn Phe Arg His Gln Lys
```

```
                     85                        90                        95
Thr Leu His Glu Thr Leu Ala Gln Tyr His Ile Pro Gly Ile Ser Gly
            100                       105                       110
Val Asp Thr Arg Ser Ile Thr Arg Lys Ile Arg Asn Tyr Gly Val Leu
            115                       120                       125
Arg Ala Gly Phe Thr Asp Asn Lys Asp Asn Ile Gln Glu Leu Val Glu
        130                       135                       140
Gln Leu Lys Thr Ala Glu Leu Pro Arg Asp Glu Val Gln Thr Val Ser
145                       150                       155                       160
Thr Lys Thr Pro Tyr Val Ser Thr Gly Ser Asp Leu Ser Val Val Leu
                165                       170                       175
Leu Asp Phe Gly Lys Lys Gln Asn Ile Val Arg Glu Leu Asn Leu Arg
            180                       185                       190
Gly Cys Asn Val Thr Val Val Pro Tyr Asp Thr Ser Ala Glu Glu Ile
            195                       200                       205
Leu Gly Met Ser Pro Asp Gly Val Met Leu Ser Asn Gly Pro Gly Asp
        210                       215                       220
Pro Asp Glu Val Asp Val Ala Leu Asp Met Ile Arg Gly Ile Leu Gly
225                       230                       235                       240
Lys Ile Pro Phe Phe Gly Ile Cys Leu Gly His Gln Leu Phe Ala Leu
                245                       250                       255
Ser Gln Gly Ala Thr Ser Phe Lys Met Lys Phe Gly His Arg Gly Ala
            260                       265                       270
Asn His Pro Val Lys Asp Leu Arg Thr Gly Lys Ile Asp Ile Thr Ser
            275                       280                       285
Gln Asn His Gly Tyr Ser Ile Asp Cys Asp Ser Leu Lys Asn Thr Asp
        290                       295                       300
Leu Glu Val Thr His Ile Ala Leu Asn Asp Gly Thr Val Glu Gly Leu
305                       310                       315                       320
Arg His Lys Glu Leu Pro Ala Phe Ser Val Gln Tyr His Pro Glu Ala
                325                       330                       335
Arg Pro Gly Pro Ser Asp Ser Asn Tyr Leu Phe Asp Glu Phe Ile Ala
                340                       345                       350
Met Met Lys Asp Phe Lys Glu Lys Glu Arg Gln Ile Asn Ala
            355                       360                       365
```

<210> 5570
<211> 563
<212> PRT
<213> S.epidermidis

<400> 5570
```
Asp Ser Glu Lys Gly Leu Gly Gly Gln Arg Glu Met Ile Ser Lys Ile
1               5                       10                        15
Asn Gly Lys Leu Phe Ala Asp Met Ile Ile Gln Gly Ala Gln Asn Leu
            20                        25                        30
Ser Asn Asn Ala Asp Leu Val Asp Ser Leu Asn Val Tyr Pro Val Pro
        35                        40                        45
Asp Gly Asp Thr Gly Thr Asn Met Asn Leu Thr Ile Thr Ser Gly Arg
        50                        55                        60
Glu Glu Val Glu Asn Asn Leu Ser Gln Asn Ile Gly Glu Leu Gly Lys
65                        70                        75                        80
Thr Phe Ser Lys Gly Leu Leu Met Gly Ala Arg Gly Asn Ser Gly Val
                85                        90                        95
Ile Leu Ser Gln Leu Phe Arg Gly Phe Cys Lys Asn Ile Glu Glu Glu
            100                       105                       110
```

```
Lys Glu Ile Ser Val Gln Gln Phe Ala Glu Ser Phe Gln Ala Gly Val
        115                 120                 125
Glu Thr Ala Tyr Lys Ala Val Met Lys Pro Val Glu Gly Thr Ile Leu
        130                 135                 140
Thr Val Ala Lys Asp Ala Ala Lys Ala Ala Met Asp Tyr Val Asp Gln
145                 150                 155                 160
Ala Glu Asp Cys Val Asp Leu Met Ala His Leu Ile Glu Ala Ala Ser
                165                 170                 175
Glu Ser Leu Asp Asn Thr Pro Asn Leu Leu Ala Val Leu Lys Glu Val
                180                 185                 190
Gly Val Val Asp Ser Gly Gly Lys Gly Leu Leu Cys Val Tyr Glu Gly
                195                 200                 205
Phe Leu Lys Gly Leu Lys Gly Glu Lys Ile Glu Ala Gln Ala Pro Lys
        210                 215                 220
Leu Asp Thr Glu Ser Phe Val Asn Asp Asp His Asp Phe His Gly Val
225                 230                 235                 240
Ile Asn Thr Glu Asp Ile Val Tyr Gly Tyr Cys Thr Glu Met Met Val
                245                 250                 255
Arg Phe Gly Lys Asn Lys Lys Ala Phe Asp Glu Gln Glu Phe Arg Asn
                260                 265                 270
Asp Met Ser Glu Phe Gly Asp Ser Leu Leu Val Ile Asn Asp Asp Glu
        275                 280                 285
Ile Val Lys Val His Val His Thr Glu His Pro Gly Asp Val Phe Asn
        290                 295                 300
Tyr Gly Gln Lys Tyr Gly Glu Leu Ile Lys Leu Lys Val Glu Asn Met
305                 310                 315                 320
Arg Glu Gln His Arg Glu Val Ile Arg Lys Glu Gln Asp Gly Leu Gln
                325                 330                 335
Ser Lys Glu Ala Asn Glu Ser Lys Thr Val Glu Thr Ala Ile Val Thr
        340                 345                 350
Ile Ser Val Gly Asp Gly Ile Ala Glu Leu Phe Lys Ser Met Gly Ala
        355                 360                 365
Thr His Ile Ile Ser Gly Gly Gln Thr Met Asn Pro Ser Thr Glu Asp
        370                 375                 380
Ile Val Lys Val Ile Glu Gln Ser Gln Cys Lys Arg Ala Ile Ile Leu
385                 390                 395                 400
Pro Asn Asn Lys Asn Ile Met Met Ala Ser Glu Gln Ala Ala Ser Ile
                405                 410                 415
Val Glu Ala Glu Thr Val Val Ile Pro Thr Lys Ser Ile Pro Gln Gly
        420                 425                 430
Ile Ser Ala Leu Phe Gln Tyr Asp Leu Glu Ser Ser Leu Glu Asp Asn
        435                 440                 445
Lys Arg His Met Ser Asp Ala Leu Glu Thr Val Gln Ser Gly Ser Ile
        450                 455                 460
Thr Phe Ala Val Arg Asp Thr Lys Ile Asp Gly Ile Glu Ile Lys Lys
465                 470                 475                 480
Asp Glu Phe Met Gly Leu Ala Glu Asp Lys Ile Val Thr Ser Asp Val
                485                 490                 495
Asn Gln Phe His Ala Val Lys Gly Leu Leu Ser Lys Leu Leu Asn Glu
                500                 505                 510
Asp Ser Glu Ile Leu Thr Met Ile Ser Gly Glu Asp Ala Asp Asn Ser
        515                 520                 525
Ile Thr Asn Gln Ile Ile Asn Trp Ile Glu Ser Glu Tyr Pro Asp Val
        530                 535                 540
Glu Val Glu Gln His Glu Gly Gly Gln Pro Ile Tyr Gln Tyr Phe Phe
545                 550                 555                 560
```

Ala Val Glu

<210> 5571
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5571
Ile Ile Arg Lys Gly Leu Ile Phe Leu Lys Tyr Phe Asn Val Lys Leu
1   5   10   15
His Met Asn Thr Lys Tyr Phe Gly Glu Thr Leu Glu Gly Thr Gly Gln
            20   25   30
Ala Glu Asp Tyr Arg Leu Lys Leu Ser Ser Lys Lys Ala Ser Gln Gln
        35   40   45
Tyr Glu Val Leu
    50

<210> 5572
<211> 183
<212> PRT
<213> S.epidermidis

<400> 5572
Val Val Arg Lys Met Asp Ile Gly Tyr Lys Leu Arg Asn Leu Arg Arg
1   5   10   15
Ile Lys Asn Leu Thr Gln Glu Glu Leu Ala Glu Arg Thr Asp Leu Ser
            20   25   30
Lys Gly Tyr Ile Ser Gln Ile Glu Ser Asn His Ala Ser Pro Ser Met
        35   40   45
Glu Thr Phe Leu Asn Leu Ile Glu Val Leu Gly Thr Ser Ala Ser Asp
        50   55   60
Phe Phe Lys Glu Pro Ser Asp Glu Lys Val Leu Tyr Lys Lys Lys Glu
65   70   75   80
Gln Thr Ile Tyr Asp Glu Tyr Asp Lys Gly Tyr Ile Leu Asn Trp Leu
            85   90   95
Val Ala Asn Ser Asn Glu Phe Asp Met Glu Pro Leu Ile Leu Thr Leu
            100   105   110
Arg Pro Asn Ala Ser Tyr Lys Asn Phe Lys Pro Ser Glu Ser Asp Thr
            115   120   125
Phe Ile Tyr Cys Leu Asn Gly Glu Val Ser Leu Gln Leu Gly Asn Gln
        130   135   140
Val Tyr Lys Ala Cys Lys Glu Asp Val Leu Tyr Phe Lys Ala Lys Asp
145   150   155   160
Lys His Arg Leu Tyr Asn Glu Thr Asp Lys Glu Val Lys Val Leu Ile
            165   170   175
Val Ala Thr Ala Ser Tyr Leu
            180

<210> 5573
<211> 178
<212> PRT
<213> S.epidermidis

<400> 5573
Leu Asn Arg Lys Val Glu Lys Arg Leu Ala Trp Ile Ala Asn Ile Leu

```
1                   5                         10                        15
Ser Leu Leu Phe Leu Ile Phe Gly Ile Leu Ser Ile Phe Val Ile Asn
            20                    25                    30
Asn Thr Ser Asn Gln Gln Gln Tyr Asn Glu Leu Met Lys Gln Phe Ser
            35                    40                    45
Gly Asn Asn Gln Asp Met Ser Ser Glu Met Phe Leu Val Ser Leu Ile
            50                    55                    60
Ala Ser Leu Val Ile Leu Gly Phe Ser Thr Leu Leu Gly Phe Val Gly
65                      70                    75                    80
Thr Met Val Ile Glu Gly Ile Lys Asn Leu Ala Ala Thr Leu Leu Ile
                85                    90                    95
Ala Ala Ala Ile Val Gly Leu Phe Thr Thr Asn Leu Ile Ala Met Val
            100                   105                   110
Leu Trp Met Ile Ala Ala Ile Arg Leu Phe Ala Lys Lys Asp Lys Thr
            115                   120                   125
Asp Val Asn Glu Asn Ala Thr Ala Gln Leu Arg Gln Asn His Ser Lys
            130                   135                   140
Ser Gln Ser Asp Trp Asn His Gln Gln Asn Gln Gln His Lys Asp Ala
145                   150                   155                   160
Trp Asp Pro Glu Gln Glu Ile Asn Lys Gln Lys Lys Asp Asp Pro Tyr
                165                   170                   175
Ile Tyr
```

<210> 5574
<211> 265
<212> PRT
<213> S.epidermidis

<400> 5574
```
Asn Ile Leu Lys Glu Arg Phe Ile Lys Lys Asn His Tyr Leu Asp Tyr
1                   5                         10                        15
Glu Phe Asp Glu Gly Ser Asp Ile Lys Leu Gly Phe Thr Thr Arg Glu
            20                    25                    30
Asn Gly Leu Ser Pro Tyr Pro Asn His Ser Phe Asn Met Ala Arg Tyr
            35                    40                    45
Ile Ser Asp Ser Ala His His Ile Thr His His Gln Asn Ile Leu Ala
            50                    55                    60
Asn Leu Ile Gly Tyr Thr Arg Asp Glu Trp Val Phe Pro Ile Gln Thr
65                      70                    75                    80
His Asp Asn Arg Ile Val Glu Val Thr Ser Glu His Lys Gly Thr Asn
                85                    90                    95
Ile Asp Glu Leu Thr Asp Asp Leu His Gly Ile Asp Gly Met Tyr Thr
            100                   105                   110
Phe Asp Ser His Ile Leu Leu Thr Met Cys Tyr Ala Asp Cys Val Pro
            115                   120                   125
Val Tyr Phe Tyr Ser Glu Pro His Gly Tyr Ile Gly Leu Ala His Ala
            130                   135                   140
Gly Trp Arg Gly Thr Tyr Gly Gln Ile Val Lys Glu Met Leu Lys Lys
145                   150                   155                   160
Val Asp Phe Asp Tyr Glu Asp Leu Lys Ile Val Ile Gly Pro Ala Thr
                165                   170                   175
Ser Asn Ser Tyr Glu Ile Asn Asp Asp Ile Lys Asn Lys Phe Glu Glu
            180                   185                   190
Leu Thr Ile Asp Ser Thr Leu Tyr Ile Glu Thr Arg Gly Lys Asn Gln
            195                   200                   205
```

```
His Gly Ile Asp Leu Lys Lys Ala Asn Ala Leu Leu Leu Glu Glu Ala
    210                 215                 220
Gly Val Pro Ser Lys Asn Ile Tyr Val Thr Glu Tyr Ala Thr Ser Glu
225                 230                 235                 240
Asn Leu Asp Leu Phe Phe Ser Tyr Arg Val Glu Lys Gly Gln Thr Gly
                245                 250                 255
Arg Met Leu Ala Phe Ile Gly Arg Lys
            260                 265
```

<210> 5575
<211> 140
<212> PRT
<213> S.epidermidis

<400> 5575
```
Tyr Asn Leu Lys Ile Lys Glu Phe Asp Leu Phe Met Lys Gln Ser Phe
1               5                   10                  15
Ile Lys Ile Gly Glu Gly Leu Thr Asp Leu Phe Glu Phe Thr Thr Leu
                20                  25                  30
Ile Glu Tyr Asn His Lys Arg Ile Asn Arg Ile Val Tyr Phe His Thr
            35                  40                  45
Pro His Ser Glu Lys Gln Leu Ser Ser Val Ala Ile Ile Met Asn Pro
        50                  55                  60
Thr Ala Glu Lys His Phe Gln Ala Met Tyr Ile Met Thr Asn Ala Leu
65                  70                  75                  80
Lys Tyr Pro Tyr Pro Glu Gly Asn Lys Lys Phe Asn Met Ile Asn Ser
                85                  90                  95
Ala Ala Glu Asn Tyr Asp Ile Pro Val Val Gly Ile Asp Val Gln Pro
            100                 105                 110
Pro Asp Val Tyr Pro Asp Leu Glu Leu Tyr Phe Asn Tyr Leu Ile Ser
        115                 120                 125
Val Leu Arg Leu Gln Arg Trp Ile Pro Pro Leu Gln
    130                 135                 140
```

<210> 5576
<211> 320
<212> PRT
<213> S.epidermidis

<400> 5576
```
Met Lys Leu Lys Trp Arg Arg Ile Leu Thr Met Ser Lys Ile Ile Phe
1               5                   10                  15
Met Gly Thr Pro Asp Phe Ser Thr Lys Ile Leu Glu Met Leu Ile Ala
                20                  25                  30
Glu His Glu Val Ile Ala Val Val Thr Gln Pro Asp Arg Pro Val Gly
            35                  40                  45
Arg Lys Lys Val Met Thr Pro Pro Val Lys Arg Val Ala Thr Lys
        50                  55                  60
His Gln Ile Pro Val Tyr Gln Pro Glu Lys Leu Lys Asp Ser Gln Glu
65                  70                  75                  80
Leu Glu Ser Leu Leu Ser Leu Glu Ser Asp Leu Ile Val Thr Ala Ala
                85                  90                  95
Phe Gly Gln Leu Leu Pro Glu Ser Leu Leu Asn Ala Pro Lys Leu Gly
            100                 105                 110
Ala Ile Asn Val His Ala Ser Leu Leu Pro Lys Tyr Arg Gly Gly Ala
        115                 120                 125
```

```
Pro Ile His Gln Ala Ile Ile Asp Gly Glu Glu Glu Thr Gly Ile Thr
    130                     135                 140
Ile Met Tyr Met Val Lys Lys Leu Asp Ala Gly Asn Ile Ile Ser Gln
145                 150                 155                 160
Gln Ser Ile Arg Ile Glu Glu Glu Asp Asn Val Gly Thr Met His Asp
                165                 170                 175
Lys Leu Ser Phe Leu Gly Ala Glu Leu Leu Lys Lys Thr Leu Pro Ser
            180                 185                 190
Ile Ile Asp Asn Thr Asn Asp Ser Ile Pro Gln Asp Asp Ala Leu Ala
        195                 200                 205
Thr Phe Ala Ser Asn Ile Arg Arg Glu Asp Glu Arg Val Asp Trp Asn
    210                 215                 220
Met Ser Ala Gln Ala Ile His Asn His Ile Arg Gly Leu Ser Pro Trp
225                 230                 235                 240
Pro Val Ala Tyr Thr Thr Met Asn Glu Lys Asn Leu Lys Leu Phe Ser
                245                 250                 255
Ala Phe Ile Val Lys Gly Lys Lys Gly Asn Pro Gly Thr Ile Ile Glu
            260                 265                 270
Thr Thr Lys His Glu Leu Ile Ile Ala Thr Gly Ser Asp Asp Ala Ile
        275                 280                 285
Ala Leu Thr Glu Ile Gln Pro Ala Gly Lys Lys Arg Met Lys Val Thr
    290                 295                 300
Asp Tyr Leu Ser Gly Val Gln Glu Ser Leu Val Gly Lys Val Leu Leu
305                 310                 315                 320
```

<210> 5577
<211> 186
<212> PRT
<213> S.epidermidis

<400> 5577
```
Ser His Met Lys Trp Ser Ile Thr Gln Leu Arg Lys Tyr Gln Gly Lys
1               5                   10                  15
Pro Phe Glu Phe Asn Gln Thr Val Asn Phe Glu His Leu Arg Glu Ser
                20                  25                  30
Leu Asp Leu Ile Asp Leu Ser Asp Ile Asn Val Glu Gly Gln Leu Thr
            35                  40                  45
Val Lys Ser Asn Glu Val Ile Ala Asp Met His Val Thr Gly Thr Tyr
    50                  55                  60
Thr Met Pro Cys Ala Arg Thr Leu Val Pro Val Asp Val Pro Leu Asp
65                  70                  75                  80
Val Ser Thr Ser Glu Val Phe Asp Leu Glu Gly Tyr Asp Gly Tyr Thr
                85                  90                  95
Asp Ser Asp Asp Gln Glu Asp Glu His Tyr His Leu Val Thr Asp Gly
                100                 105                 110
Met Ile Asn Ile Lys Asp Ile Ala Glu Glu Leu Val Ile Ile Glu Lys
        115                 120                 125
Pro Met Arg Ala Tyr Ser Glu His Ser Asp Gln Met Leu Thr Glu Gly
    130                 135                 140
Asn Gly Trp Glu Val Ile Asp Glu Asp Gln Leu Thr Glu Val Gln Lys
145                 150                 155                 160
Glu Gln Asp Ser Asp Ser Glu Gln Arg Lys Ser Asp Pro Arg Leu Gln
                165                 170                 175
Lys Leu Gln Gln Leu Asn Asp Lys Asp Asn
            180                 185
```

<210> 5578
<211> 269
<212> PRT
<213> S.epidermidis

<400> 5578
Arg Ser Met Asn Lys Pro Ile Gly Val Ile Asp Ser Gly Val Gly Gly
1   5   10   15
Leu Thr Val Ala Lys Glu Ile Met Arg Gln Leu Pro Asn Glu Thr Ile
                20   25   30
Tyr Tyr Leu Gly Asp Ile Ala Arg Cys Pro Tyr Gly Pro Arg Pro Gly
        35   40   45
Glu Glu Val Lys Lys Phe Thr Thr Glu Leu Ala Gln Lys Leu Met Glu
    50   55   60
Phe Asp Ile Lys Met Leu Val Ile Ala Cys Asn Thr Ala Thr Ala Val
65   70   75   80
Ala Leu Asn Tyr Leu Gln Asn Ile Leu Pro Ile Pro Val Ile Gly Val
                85   90   95
Ile Glu Pro Gly Ala Arg Thr Ala Ile Met Thr Thr Lys Asn Gln Asn
                100   105   110
Val Leu Val Leu Gly Thr Glu Gly Thr Ile Lys Ser Glu Ala Tyr Arg
            115   120   125
Thr His Ile Lys Lys Ile Asn Pro Asn Val Asn Val Tyr Ser Val Ala
        130   135   140
Cys Pro Gly Phe Val Pro Leu Val Glu Gln Met Arg Tyr Lys Asp Pro
145   150   155   160
Thr Ile Thr Asn Ile Val Ile His Gln Thr Leu Lys Gln Trp Arg Asn
                165   170   175
Ser Asp Ala Asp Thr Val Ile Leu Gly Cys Thr His Tyr Pro Leu Leu
            180   185   190
Tyr Gln Pro Ile Tyr Glu Tyr Phe Ser Gly Thr Lys Thr Val Ile Ser
            195   200   205
Ser Gly Leu Glu Thr Ala Arg Glu Val Ser Ala Leu Leu Thr Phe Ser
    210   215   220
Asn Glu His Ala Ser Tyr Thr Glu His Pro Gln His Arg Phe Phe Ala
225   230   235   240
Thr Gly Asp Thr Thr His Ile Lys Asn Ile Ile Asp Glu Trp Leu Asn
            245   250   255
Met Lys Val Glu Val Gln Arg Ile Thr Val Asp Asp Ser
            260   265

<210> 5579
<211> 210
<212> PRT
<213> S.epidermidis

<400> 5579
Gln Phe Met Asn Phe Lys Lys Thr Val Ala Ile Val Leu Thr Ser Ala
1   5   10   15
Val Leu Leu Ala Gly Cys Thr Ile Asp Lys Lys Glu Ile Lys Lys Tyr
                20   25   30
Asp Asp Gln Val Gln Lys Ala Met Asp Gln Glu Lys Thr Val Asn Gln
        35   40   45
Val Ser Lys Lys Ile Asn Glu Leu Glu Glu Lys Lys Gln Lys Leu Phe
    50   55   60
Lys Lys Val Asn Asp Lys Asp Gln Ser Thr Arg Lys Lys Ala Ala Glu

```
                    65                      70                      75                      80
        Asp Ile Val Glu Asn Val Lys Gln Arg Gln Lys Glu Phe Glu Lys Glu
                            85                      90                      95
        Glu Lys Ala Leu Asp Asn Ser Glu Lys Glu Phe Lys Gln Ala Lys Gln
                           100                     105                     110
        Tyr Leu Glu His Val Glu Asn Lys Ala Lys Lys Lys Glu Val Glu Gln
                   115                     120                     125
        Leu Asp Ser Ala Ile Lys Glu Lys Tyr Lys Ser His Asp Ala Tyr Ala
           130                     135                     140
        Lys Ala Tyr Lys Lys Ala Leu Asn Lys Glu Lys Glu Leu Phe Ser Tyr
        145                     150                     155                     160
        Leu Asn Glu Asp Asn Ala Thr Gln Ser Glu Val Asp Gly Lys Ser Lys
                           165                     170                     175
        Asp Leu Ser Lys Ala Tyr Lys Glu Met Asn Asn Lys Phe Asn Ala Tyr
                   180                     185                     190
        Ser Lys Ala Ile Glu Lys Val Lys Arg Glu Lys Gln Asp Val Asp Gln
                   195                     200                     205
        Leu Lys
        210
```

<210> 5580
<211> 427
<212> PRT
<213> S.epidermidis

<400> 5580
```
        Phe Tyr Met Lys Leu Ile Lys Asn Gly Lys Ile Leu Lys Asn Gly Ile
        1                   5                       10                      15
        Leu Lys Asp Thr Glu Ile Leu Ile Asp Gly Lys Arg Ile Lys Gln Ile
                   20                      25                      30
        Ser Ser Lys Ile Asn Ala Ser Ser Ser Asn Ile Glu Val Ile Asp Ala
                   35                      40                      45
        Lys Gly Asn Leu Ile Ala Pro Gly Phe Val Asp Val His Val His Leu
           50                      55                      60
        Arg Glu Pro Gly Gly Glu His Lys Glu Thr Ile Glu Ser Gly Thr Lys
        65                      70                      75                      80
        Ala Ala Ala Arg Gly Gly Phe Thr Thr Val Cys Pro Met Pro Asn Thr
                           85                      90                      95
        Arg Pro Val Pro Asp Thr Val Glu His Val Arg Glu Leu Arg Gln Arg
                   100                     105                     110
        Ile Ser Glu Thr Ala Gln Val Arg Val Leu Pro Tyr Ala Ala Ile Thr
                   115                     120                     125
        Lys Arg Gln Ala Gly Thr Glu Leu Val Asp Phe Glu Lys Leu Ala Leu
           130                     135                     140
        Glu Gly Val Phe Ala Phe Thr Asp Asp Gly Val Gly Val Gln Thr Ala
        145                     150                     155                     160
        Ser Met Met Tyr Ala Ala Met Lys Gln Ala Ala Lys Val Lys Lys Pro
                           165                     170                     175
        Ile Val Ala His Cys Glu Asp Asn Ser Leu Ile Tyr Gly Gly Ala Met
                   180                     185                     190
        His Lys Gly Lys Arg Ser Glu Glu Leu Gly Ile Pro Gly Ile Pro Asn
                   195                     200                     205
        Ile Ala Glu Ser Val Gln Ile Ala Arg Asp Val Leu Leu Ala Glu Ala
           210                     215                     220
        Thr Gly Cys His Tyr His Val Cys His Val Ser Thr Lys Glu Ser Val
        225                     230                     235                     240
```

```
Arg Val Ile Arg Asp Ala Lys Lys Ala Gly Ile His Val Thr Ala Glu
            245                 250                 255
Val Thr Pro His His Leu Leu Leu Thr Glu Asn Asp Val Pro Gly Asp
            260                 265                 270
Asp Ser Asn Tyr Lys Met Asn Pro Pro Leu Arg Ser Asn Glu Asp Arg
            275                 280                 285
Glu Ala Leu Leu Glu Gly Leu Leu Asp Gly Thr Ile Asp Cys Ile Ala
            290                 295                 300
Thr Asp His Ala Pro His Ala Lys Glu Glu Lys Ala Gln Pro Met Thr
305                 310                 315                 320
Lys Ala Pro Phe Gly Ile Val Gly Ser Glu Thr Ala Phe Pro Leu Leu
            325                 330                 335
Tyr Thr His Phe Val Arg Arg Gly Asn Trp Ser Leu Gln Gln Leu Val
            340                 345                 350
Asp Tyr Phe Thr Ile Lys Pro Ala Thr Ile Phe Asn Leu Asn Tyr Gly
            355                 360                 365
Lys Leu His Lys Asp Ser Tyr Ala Asp Leu Thr Ile Ile Asp Leu Asn
            370                 375                 380
Thr Glu Lys Glu Ile Lys Ser Glu Asp Phe Leu Ser Lys Ala Asp Asn
385                 390                 395                 400
Thr Pro Phe Ile Gly Glu Lys Val Tyr Gly Asn Pro Thr Leu Thr Met
            405                 410                 415
Leu Lys Gly Glu Val Val Phe Glu Glu Glu Lys
            420                 425
```

<210> 5581
<211> 133
<212> PRT
<213> S.epidermidis

<400> 5581
```
Asn Lys Met Lys Ile Phe Leu Lys Lys Ser Leu Glu Ile His Pro Leu
1               5                   10                  15
Asn Leu Lys Lys Val Thr Lys Met Gly Gln Asn Asp Leu Val Lys Thr
            20                  25                  30
Leu Arg Met Asn Tyr Leu Phe Asp Phe Tyr Gln Ser Leu Leu Thr Asn
            35                  40                  45
Lys Gln Lys Asn Tyr Leu Glu Leu Phe Tyr Leu Gln Asp Tyr Ser Leu
        50                  55                  60
Ser Glu Ile Ala Asp Thr Phe Glu Val Ser Arg Gln Ala Val Tyr Asp
65                  70                  75                  80
Asn Ile Arg Arg Thr Gly Asp Leu Val Glu Asp Tyr Glu Ser Lys Leu
            85                  90                  95
Arg Leu Tyr Gln Arg Phe Glu Lys Arg Arg Glu Leu Tyr Asn Leu Met
            100                 105                 110
Lys Gln Ser Leu Asn Gln Pro Glu Leu Leu Lys Gln Tyr Ile Thr Gln
            115                 120                 125
Leu Glu Glu Leu Glu
        130
```

<210> 5582
<211> 158
<212> PRT
<213> S.epidermidis

<400> 5582

Val Arg Met Lys Leu Met Asn Val Pro Ile Leu Pro Thr Ile Ser Thr
1   5   10   15
Ser Cys Ile Val Ile Ser Ala Ile Leu Val Ala Ile Gly Trp Ala Leu
            20   25   30
Ile Trp Lys Arg Gln Val His Lys His Lys Asn Ile Met Leu Trp Ala
        35   40   45
Ala Phe Phe Ala Leu Thr Phe Phe Ile Ile Tyr Ala Ala Arg Thr Ile
    50   55   60
Phe Ile Gly Asn Thr Ala Phe Gly Gly Pro Ser Ser Ile Lys Val Tyr
65   70   75   80
Tyr Thr Ile Phe Leu Val Phe His Ile Ile Leu Ala Thr Val Gly Gly
            85   90   95
Val Leu Gly Leu Ile Gln Ile Ile Leu Ala Phe Lys Asp Lys Leu His
            100   105   110
Ile His Arg Lys Ile Gly Pro Trp Ala Ser Ile Ile Trp Phe Phe Thr
        115   120   125
Ala Ile Thr Gly Val Ala Val Tyr Val Leu Leu Tyr Val Leu Tyr Pro
    130   135   140
Gly Gly Glu Thr Thr Ser Leu Leu Lys Ala Thr Leu Gly Leu
145   150   155

<210> 5583
<211> 223
<212> PRT
<213> S.epidermidis

<400> 5583
Trp Arg Thr Asn Met Asp Lys Glu Tyr Val Val Ile Gly Leu Gly Arg
1   5   10   15
Phe Gly Gly Ser Ile Val Arg Glu Leu Asn Ala Leu Asp Met Asp Val
            20   25   30
Met Ala Ile Asp Arg Asp Glu Asn Arg Val Asn Glu Tyr Ser Asp Ile
        35   40   45
Ala Thr His Ala Val Val Ala Asp Thr Thr Asp Glu Ala Val Met Lys
    50   55   60
Ser Leu Gly Ile Arg Asn Phe Asp His Val Ile Val Ala Ile Gly Glu
65   70   75   80
Asn Ile Gln Ser Ser Thr Leu Thr Thr Leu Ile Leu Lys Glu Leu Gly
            85   90   95
Val Lys Lys Val Thr Ala Lys Ala Gln Asn Asp Tyr His Ala Lys Ile
            100   105   110
Leu Asn Lys Ile Gly Ala Asp Thr Val Val His Pro Glu Arg Asp Met
        115   120   125
Gly Arg Arg Ile Ala His Asn Val Ala Ser Ala Ser Val Leu Asp Tyr
    130   135   140
Leu Glu Leu Ala Asp Glu His Ser Ile Val Glu Leu Lys Ser Thr Glu
145   150   155   160
Lys Met Ala Gly Gln Thr Ile Ile Glu Leu Asp Ile Arg Ala Gln Tyr
            165   170   175
Gly Ile Asn Ile Ile Ala Ile Lys Arg Ala Lys Glu Phe Ile Val Ser
            180   185   190
Pro Asp Pro Asn Ile Asn Ile Glu Ile Gly Asp Ile Leu Ile Met Ile
        195   200   205
Gly His Asp Asn Asp Leu Gly Arg Phe Glu Lys Asn Ile Ser Lys
    210   215   220

<210> 5584
<211> 437
<212> PRT
<213> S.epidermidis

<400> 5584
Glu Asp Lys Asn Val Ala Phe Glu Phe Arg Leu Pro Asp Ile Gly Glu
1   5   10   15
Gly Ile His Glu Gly Glu Ile Val Lys Trp Phe Ile Lys Ala Gly Asp
            20   25   30
Thr Ile Glu Glu Asp Asp Val Leu Ala Glu Val Gln Asn Asp Lys Ser
            35   40   45
Val Val Glu Ile Pro Ser Pro Val Ser Gly Thr Val Glu Glu Val Leu
        50   55   60
Val Asp Glu Gly Thr Val Ala Val Val Gly Asp Val Ile Val Lys Ile
65   70   75   80
Asp Ala Pro Asp Ala Glu Glu Met Gln Phe Lys Gly His Gly Asp Asp
                85   90   95
Glu Asp Ser Lys Lys Glu Glu Lys Glu Gln Glu Ser Pro Val Gln Glu
            100   105   110
Glu Ala Ser Ser Thr Gln Ser Gln Glu Lys Thr Glu Val Asp Glu Ser
            115   120   125
Lys Thr Val Lys Ala Met Pro Ser Val Arg Lys Tyr Ala Arg Glu Asn
        130   135   140
Gly Val Asn Ile Lys Ala Val Asn Gly Ser Gly Lys Asn Gly Arg Ile
145   150   155   160
Thr Lys Glu Asp Ile Asp Ala Tyr Leu Asn Gly Gly Ser Ser Glu Glu
                165   170   175
Gly Ser Asn Thr Ser Ala Ala Ser Glu Ser Thr Ser Ser Asp Val Val
            180   185   190
Asn Ala Ser Ala Thr Gln Ala Leu Pro Glu Gly Asp Phe Pro Glu Thr
        195   200   205
Thr Glu Lys Ile Pro Ala Met Arg Lys Ala Ile Ala Lys Ala Met Val
        210   215   220
Asn Ser Lys His Thr Ala Pro His Val Thr Leu Met Asp Glu Ile Asp
225   230   235   240
Val Gln Glu Leu Trp Asp His Arg Lys Lys Phe Lys Glu Ile Ala Ala
                245   250   255
Glu Gln Gly Thr Lys Leu Thr Phe Leu Pro Tyr Val Val Lys Ala Leu
            260   265   270
Val Ser Ala Leu Lys Lys Tyr Pro Ala Leu Asn Thr Ser Phe Asn Glu
        275   280   285
Glu Ala Gly Glu Val Val His Lys His Tyr Trp Asn Ile Gly Ile Ala
        290   295   300
Ala Asp Thr Asp Lys Gly Leu Leu Val Pro Val Val Lys His Ala Asp
305   310   315   320
Arg Lys Ser Ile Phe Glu Ile Ser Asp Glu Ile Asn Glu Leu Ala Val
                325   330   335
Lys Ala Arg Asp Gly Lys Leu Thr Ser Glu Glu Met Lys Gly Ala Thr
            340   345   350
Cys Thr Ile Ser Asn Ile Gly Ser Ala Gly Gly Gln Trp Phe Thr Pro
            355   360   365
Val Ile Asn His Pro Glu Val Ala Ile Leu Gly Ile Gly Arg Ile Ala
        370   375   380
Gln Lys Pro Ile Val Lys Asp Gly Glu Ile Val Ala Ala Pro Val Leu
385   390   395   400

```
Ala Leu Ser Leu Ser Phe Asp His Arg Gln Ile Asp Gly Ala Thr Gly
            405                     410                 415
Gln Asn Ala Met Asn His Ile Lys Arg Leu Leu Asn Asn Pro Glu Leu
            420                 425                 430
Leu Leu Met Glu Gly
        435
```

<210> 5585
<211> 351
<212> PRT
<213> S.epidermidis

<400> 5585

```
Lys Met Lys Lys Leu Ile Ile Lys Val Ile Gly Val Ile Leu Leu Val
1               5                   10                  15
Thr Phe Leu Ile Tyr Leu Phe Tyr Ser Pro Arg Leu Lys Phe Asp Val
            20                  25                  30
Leu Glu Asn Pro Asn Lys Asn Ser Lys Thr Thr Lys Thr Glu Gln Phe
        35                  40                  45
Lys Gln Val Asn Lys Asp Ala Glu Asn Pro Lys Pro Lys Glu Gly Ile
    50                  55                  60
Gly Thr Trp Ile Gly Lys Asp Ile Lys Thr Leu Thr His His Tyr Gly
65                  70                  75                  80
Gln Ala Asp Arg Ser Tyr Pro Tyr Lys Asn Gly Leu Lys Asn Tyr Val
            85                  90                  95
Phe Lys Gln Lys Asp Glu Tyr Tyr Ile Val Ser Thr Asn Lys Gly Thr
            100                 105                 110
Ile Thr Ser Val Tyr Ala Thr Gly Lys Gly Val Lys Val Ser Pro Leu
            115                 120                 125
Lys Ile Gly Glu Ser Ser Ser His Ile Phe Glu Asp Thr Ser Ile Asn
    130                 135                 140
Pro Glu Pro Thr Val Lys Thr Lys Gly Lys Thr Tyr Lys Phe Glu Met
145                 150                 155                 160
Ser Asp Glu Asp Leu Lys Thr Gln Thr Leu Ile Lys Tyr Gly Asp Val
            165                 170                 175
Tyr Ala Gln Ile Tyr Ser Asp Gln Gln Thr Asn Lys Ile Leu Ala Val
            180                 185                 190
Arg Phe Leu Asp Ala Asn Thr Leu Ala Thr Leu Gln Pro Tyr Lys Leu
    195                 200                 205
Asn Arg Ala Glu Asp Glu Gly Gln Ile Ser Glu Ser Ser Asp Asp Lys
    210                 215                 220
Ile Pro His Glu Gln Asn Pro Asn Gln Leu Ile Thr Leu Tyr Glu Val
225                 230                 235                 240
Thr Asn Lys Met Arg Glu Met Lys Asn Leu Asn Ser Leu Lys Val Asn
            245                 250                 255
Asn Asp Ile Ala Arg Ile Ala Ala Ile Asn Leu Tyr Glu Ala Thr Asp
            260                 265                 270
Lys Gly Ser Asn Ser Val Glu Phe Thr Glu Asn Ala Leu Thr Gln Gln
    275                 280                 285
Leu Asp Glu Arg His Val Ser Tyr Lys Ser Ala Ser Gln Asn Val Gly
    290                 295                 300
Tyr Asp Phe Asp Asp Val Pro Thr Leu Ile His Ser Trp Ile Asn Ser
305                 310                 315                 320
Asp Ile His Arg Ser Arg Leu Leu Ser Asn Lys Tyr Asp Glu Met Gly
            325                 330                 335
Gly Glu Val Met Ser Asp Tyr Tyr Ser Leu Ile Phe Val Glu Lys
```

```
<210> 5586
<211> 187
<212> PRT
<213> S.epidermidis

<400> 5586
Met Lys Trp Lys Cys Glu Ser Met Arg Val Ile Ala Gly Lys His Lys
1               5                  10                  15
Ser Lys Ala Leu Glu Ser Leu Glu Gly Arg Asn Thr Arg Pro Thr Met
            20                  25                  30
Asp Lys Val Lys Glu Gly Ile Phe Asn Ser Leu Tyr Asp Val Ser Gly
        35                  40                  45
Leu Gly Leu Asp Leu Phe Ala Gly Ser Gly Ala Leu Gly Ile Glu Ala
    50                  55                  60
Leu Ser Arg Gly Met Asp Lys Met Ile Phe Val Asp Gln Asn Phe Lys
65                  70                  75                  80
Ala Val Lys Val Ile Lys Ala Asn Leu Asn Gln Leu Asp Leu Met Ser
                85                  90                  95
Gln Ala Glu Val Tyr Lys Asn Asn Ala Asp Arg Ala Leu Lys Ala Leu
            100                 105                 110
Ala Lys Arg Glu Ile Gln Phe Asp Val Ile Phe Leu Asp Pro Pro Tyr
            115                 120                 125
Asn Lys Gly Leu Ile Asn Glu Ala Ile Ser Arg Ile Ala Glu Phe Asn
        130                 135                 140
Leu Leu Lys Glu Asn Gly Ile Ile Val Cys Glu Phe Ser His Asn Glu
145                 150                 155                 160
Lys Ile Thr Ile Ala Pro Phe Gln Met Ile Lys Arg Tyr His Tyr Gly
                165                 170                 175
Leu Thr Asp Thr Leu Leu Leu Glu Lys Gly Glu
            180                 185

<210> 5587
<211> 173
<212> PRT
<213> S.epidermidis

<400> 5587
Met Leu Ile Asp Ile Val Val Leu Leu Ile Ile Cys Tyr Phe Ile Val
1               5                  10                  15
Ile Gly Phe Arg Arg Gly Ile Trp Leu Ser Ile Leu His Phe Ala Ser
            20                  25                  30
Ser Ile Val Ser Leu Tyr Ile Ala Ser Gln His Tyr Gln Ser Ile Ala
            35                  40                  45
Gln Arg Leu Val Val Phe Val Pro Phe Pro Lys Thr Val Ala Phe Asp
        50                  55                  60
Met Val Tyr Thr Ile Pro Tyr Asp His Leu Gln Tyr Arg Phe Glu Lys
65                  70                  75                  80
Val Ile Ala Phe Ile Ile Ile Phe Gly Met Cys Lys Leu Ile Leu Tyr
                85                  90                  95
Leu Val Val Val Thr Phe Asp Asn Ile Ile Thr Tyr Lys Lys Ile His
            100                 105                 110
Leu Val Ser Arg Ile Ser Ser Val Val Leu Ser Ile Ile Ser Val Phe
            115                 120                 125
Ile Tyr Leu Gln Ile Gly Leu Tyr Leu Leu Ser Leu Tyr Pro His Ser
```

```
            130                     135                     140
Phe Ile Gln Tyr Gln Leu Ser Gln Ser Leu Val Ser Arg Val Val Ile
145                     150                     155                     160
Glu Gln Ile Pro Tyr Leu Ser Gln Phe Ile Leu Asn Leu
                    165                     170


<210> 5588
<211> 608
<212> PRT
<213> S.epidermidis


<400> 5588
Phe Ile Ser Glu Ile Lys Ser Arg Ala Leu Asp Leu Asn Ile Gln Gly
1                   5                       10                      15
Ser Asp Ile Ser Met Ala Glu Lys Lys Ile Ile Val Val Gly Gly Gly
                20                      25                      30
Leu Ala Gly Leu Met Ser Thr Ile Lys Ala Ala Glu Gln Gly Ala His
            35                      40                      45
Val Asp Leu Phe Ser Ile Val Pro Val Lys Arg Ser His Ser Val Cys
        50                      55                      60
Ala Gln Gly Gly Ile Asn Gly Ala Val Asn Thr Lys Gly Glu Gly Asp
65                      70                      75                      80
Ser Pro Trp Ile His Phe Asp Asp Thr Val Tyr Gly Gly Asp Phe Leu
                85                      90                      95
Ala Asn Gln Pro Pro Val Lys Ala Met Ala Asp Ala Ala Pro Lys Ile
                100                     105                     110
Ile His Leu Leu Asp Arg Met Gly Val Met Phe Asn Arg Thr Lys Glu
            115                     120                     125
Gly Leu Leu Asp Phe Arg Arg Phe Gly Gly Thr Leu His His Arg Thr
            130                     135                     140
Ala Phe Ala Gly Ala Thr Thr Gly Gln Gln Leu Leu Tyr Ala Leu Asp
145                     150                     155                     160
Glu Gln Val Arg Ser Phe Glu Val Asp Gly Leu Val Thr Lys Tyr Glu
                165                     170                     175
Gly Trp Glu Phe Leu Gly Ile Val Lys Asp Glu Glu Asp Ala Ala Arg
                180                     185                     190
Gly Ile Val Ala Gln Asn Met Thr Thr Ser Glu Ile Gln Ser Phe Gly
                195                     200                     205
Ser Asp Ala Val Ile Met Ala Thr Gly Gly Pro Gly Ile Ile Phe Gly
            210                     215                     220
Lys Thr Thr Asn Ser Met Ile Asn Thr Gly Ser Ala Ala Ser Ile Val
225                     230                     235                     240
Tyr Gln Gln Gly Ala Ile Tyr Ala Asn Gly Glu Phe Ile Gln Ile His
                245                     250                     255
Pro Thr Ala Ile Pro Gly Asp Asp Lys Leu Arg Leu Met Ser Glu Ser
                260                     265                     270
Ala Arg Gly Glu Gly Gly Arg Ile Trp Thr Tyr Lys Asp Gly Lys Pro
            275                     280                     285
Trp Tyr Phe Leu Glu Glu Lys Tyr Pro Asp Tyr Gly Asn Leu Val Pro
            290                     295                     300
Arg Asp Ile Ala Thr Arg Glu Ile Phe Asp Val Cys Ile Asn Gln Lys
305                     310                     315                     320
Leu Gly Ile Asn Gly Glu Asn Met Val Tyr Leu Asp Leu Ser His Lys
                325                     330                     335
Asp Pro His Glu Leu Asp Val Lys Leu Gly Gly Ile Ile Glu Ile Tyr
            340                     345                     350
```

```
Glu Lys Phe Thr Gly Asp Asp Pro Arg Lys Val Pro Met Lys Ile Phe
    355                     360                 365
Pro Ala Val His Tyr Ser Met Gly Gly Leu Tyr Val Asp Tyr Asp Gln
    370                 375                 380
Met Thr Asn Ile Lys Gly Leu Phe Ala Ala Gly Glu Cys Asp Phe Ser
385                 390                 395                     400
Gln His Gly Gly Asn Arg Leu Gly Ala Asn Ser Leu Leu Ser Ala Ile
                405                 410                 415
Tyr Gly Gly Thr Val Ala Gly Pro Asn Ala Ile Lys Tyr Val Glu Asn
            420                 425                 430
Val Glu Lys Ser Tyr Thr Asp Leu Asp Asp Ser Ile Phe Glu Ala Arg
            435                 440                 445
Val Lys Glu Glu Lys Glu Arg Phe Asp His Leu Leu Asn Met Arg Gly
        450                 455                 460
Thr Glu Asn Ala Tyr Lys Leu His Arg Glu Leu Gly Glu Ile Met Thr
465                 470                 475                     480
Ala Asn Val Thr Val Val Arg Glu Asn Glu Lys Leu Leu Glu Thr Asp
                485                 490                 495
Lys Lys Ile Gln Glu Leu Met Lys Arg Tyr Glu Asp Ile Asp Met Glu
            500                 505                 510
Asp Thr Gln Thr Trp Ser Asn Gln Ala Val Phe Phe Thr Arg Gln Leu
            515                 520                 525
Trp Asn Met Leu Val Leu Ala Arg Val Ile Thr Ile Gly Ala Tyr Asn
        530                 535                 540
Arg Asn Glu Ser Arg Gly Ala His Tyr Lys Pro Glu Phe Pro Glu Arg
545                 550                 555                     560
Asn Asp Glu Glu Trp Leu Lys Thr Thr Met Ala Arg Tyr Lys Gly Arg
                565                 570                 575
Ser Glu Lys Pro Glu Phe Thr Tyr Glu Pro Val Asp Val Ser Leu Ile
            580                 585                 590
Pro Pro Arg Lys Arg Asp Tyr Thr Ser Lys Ser Lys Gly Gly Asn Lys
            595                 600                 605

<210> 5589
<211> 79
<212> PRT
<213> S.epidermidis

<400> 5589
Cys Met Thr Asp Thr Val Ile Ile Tyr Thr Gln Asp Asp Cys Pro Pro
1               5                   10                  15
Cys Ala Phe Ile Lys Asn Tyr Leu Val Asn Lys Asn Ile Lys Phe Thr
            20                  25                  30
Glu Lys Asn Ile Lys Asn Gln Lys Tyr Lys Asn Glu Met Met Asp Tyr
        35                  40                  45
Asp Ala Phe Ala Thr Pro Phe Ile Leu Leu Lys Gly Met Pro Met Tyr
    50                  55                  60
Gln Val Asp Met Glu Lys Leu Asn Asp Glu Leu Asn Ile Thr Pro
65                  70                  75

<210> 5590
<211> 149
<212> PRT
<213> S.epidermidis

<400> 5590
```

```
Ile Lys Asp Asp Ser Val Ile Thr Glu Glu Thr Leu Asp Ile Leu Asp
1               5                   10                  15
Asp Ile Glu Asp Ile Ser Asp Met Ile Val Gln Ser Asp Ile Tyr Val
            20                  25                  30
Ser Tyr Arg Arg Ala Lys Met Gln Leu Asp Ala Asp Asp Glu Ala Ser
        35                  40                  45
Leu Leu Tyr Gln Ala Phe Leu Lys Val Lys Asp Lys Tyr Asp Asp Val
    50                  55                  60
Met Arg Phe Gly Lys Tyr His Pro Asp Tyr Lys Asp Ile Met Leu Glu
65                  70                  75                  80
Thr Arg Lys Arg Lys Arg Ala Tyr Glu Met Leu Pro Val Val Met Glu
            85                  90                  95
Tyr Lys Ala Lys Glu Val Ala Leu Gln Asn Leu Ile Asp Glu Val Met
            100                 105                 110
Ser Lys Ile Ala Leu Ala Val Ser Glu His Val Lys Ile Glu Thr Gly
        115                 120                 125
Asn Pro Phe Phe Gln Thr Gly His Asp Gly Cys Ala Ser Gly Gly Thr
    130                 135                 140
Cys Asn Cys Ser Leu
145
```

<210> 5591
<211> 161
<212> PRT
<213> S.epidermidis

<400> 5591
```
Lys Lys Cys Asp Asp Met Lys Lys Ala Ile Ile Val Met Phe Val Val
1               5                   10                  15
Thr Val Ile Leu Thr Ile Ala Ala Leu Ile Asp Glu Phe Met Ile Gln
            20                  25                  30
Asp Ala Lys His Gly Gln Ser Arg Phe Thr Ser His His Pro Met Lys
        35                  40                  45
Ile Asn Thr Tyr Lys Lys Gly Gln Cys Thr Tyr Tyr Val Phe Glu Arg
    50                  55                  60
Val Lys Asn Asp Gly Asn Lys Ile Asn Asn Thr Trp Ser Asp Ala Lys
65                  70                  75                  80
His Trp Asp Lys Lys Ala Ile Asp Asp Gly Tyr Ile Val Asp Arg Asn
            85                  90                  95
Pro Lys Lys Gly Ser Ile Leu Gln Ser Ser Lys Gly Lys Tyr Gly His
        100                 105                 110
Val Ala Tyr Ile Glu Thr Ile Asn Glu Asp Gly Ser Met Gln Val Ser
        115                 120                 125
Glu Met Asn Tyr Thr Gln Pro Tyr Glu Ile Thr Lys Arg Thr Ile His
    130                 135                 140
Thr Tyr Asp Ile Lys Asn Tyr Tyr Tyr Ile His Pro Gln Lys Ile Lys
145                 150                 155                 160
Thr
```

<210> 5592
<211> 258
<212> PRT
<213> S.epidermidis

<400> 5592

```
Ile Thr Ile Asp Ile Tyr Gln His Phe Arg Lys Glu Glu Gln Asp Ala
1               5                   10                  15
Leu Asp Gln Phe Ile Asp Lys Cys Lys Gln Ala Asp Ala Asn Tyr Ala
            20                  25                  30
Pro Val Leu Thr His Phe Leu Asp Pro Arg Gly Gln Tyr Ile Leu Glu
            35                  40                  45
Val Ile Thr Arg Ser Tyr Gln Asp Leu His Val Thr Phe Phe Gly Gly
    50                  55                  60
Pro His Ala Glu Arg Lys Arg Ala Ile Ile Ala Pro Leu Tyr Phe Lys
65                  70                  75                  80
Pro Gln Pro Glu Asp Phe Glu Leu Thr Leu Phe Glu Leu Gln Tyr Pro
                85                  90                  95
Lys Lys Phe Val Thr Ile Gln His Gln His Val Leu Gly Thr Leu Met
            100                 105                 110
Ser Leu Gly Ile Gln Arg Asp Gln Leu Gly Asp Ile Ile Val Gly Glu
            115                 120                 125
Asp Ile Gln Phe Val Leu Thr Lys Gln Leu Glu Ser Tyr Ile Ile Ser
    130                 135                 140
Glu Leu Thr Arg Ile Lys Gly Ala Ser Val Lys Leu Asn Ser Ile Pro
145                 150                 155                 160
Thr Glu Asp Met Ile Gln Ser Glu Glu Asn Trp Lys Val His Ser Thr
                165                 170                 175
Thr Val Ser Ala Leu Arg Leu Asp Val Val Leu Lys Glu Met Ile His
            180                 185                 190
Lys Ser Arg Asn Ile Ala Gln Gln Leu Ile Ile Lys Lys Arg Val Lys
            195                 200                 205
Val Asn His Thr Val Ile Asp Ser Thr Asp Phe Gln Leu Glu Gln Asn
    210                 215                 220
Asp Leu Leu Ser Ile Gln Gly Tyr Gly Arg Ala Gln Ile Val Glu Ile
225                 230                 235                 240
Gly Gly Lys Thr Lys Lys Asn Lys Leu His Ile His Tyr Gln Thr Leu
                245                 250                 255
Phe Lys
```

```
<210> 5593
<211> 50
<212> PRT
<213> S.epidermidis

<400> 5593
Gln Leu Ile Asp Ser Lys Ala Asn Lys Lys Ile Met Lys Asn Tyr Asn
1               5                   10                  15
Trp Glu Tyr Phe Lys Val Gln Ile Ile Lys Lys Phe Ser Glu Pro Lys
            20                  25                  30
Thr Lys Ser Ile Tyr Ser Gln Glu Lys Leu Met Trp Ser Leu Phe Leu
            35                  40                  45
Asp Leu
    50
```

```
<210> 5594
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5594
```

```
Ser Asn Tyr Asp Ile Leu Phe Ile His Ile Arg Pro Pro Leu Tyr Lys
1               5                   10                  15
Arg Gly Met Ile Thr Asn Ile Pro Gln Ser Leu Ile Ile Ser Phe Leu
            20                  25                  30
Pro His Met Leu Cys Arg Lys Gln Ile Ile Leu Ile Ile Ile Leu Thr
        35                  40                  45
Met Glu Leu Ile Lys Val Asn Leu Lys Gln Lys Gln
    50                  55                  60
```

<210> 5595
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5595
```
Thr Ile Asn Asp Asp Val Phe Tyr Phe Ile Glu Val Phe His Val Ala
1               5                   10                  15
Ser Pro Pro Phe Lys Glu Ser Phe Asp Arg Leu Phe Tyr Phe Pro Ile
            20                  25                  30
Leu Leu Ser Lys Ile Gln Val Glu Phe
        35                  40
```

<210> 5596
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5596
```
Leu Gln Asn Asp Arg Ile Arg Phe Asp Ser Leu Ser Leu Ser Phe Cys
1               5                   10                  15
Tyr Leu Tyr Tyr Lys Val Asn Leu Thr Gln Phe Val Ala Phe Phe Ile
            20                  25                  30
Leu Ser Asn Tyr Glu Phe Leu Thr Val Ala Leu Phe Lys Phe Phe Asn
        35                  40                  45
Ser
```

<210> 5597
<211> 63
<212> PRT
<213> S.epidermidis

<400> 5597
```
Leu Gln Gln Asp Ile Asp Asn Met Lys Arg Tyr Thr His Lys Ser Arg
1               5                   10                  15
Val Phe Tyr Tyr Lys Val Asp Arg Lys Val Thr Leu Tyr Thr Lys Tyr
            20                  25                  30
Asp Lys Lys Val Gln Val Ser Glu Arg Ile Thr Leu Thr Thr Met Gly
        35                  40                  45
Leu Asn Tyr Asn Leu Cys Phe Val Ser Asn Thr Met Ile Glu Leu
    50                  55                  60
```

<210> 5598
<211> 111
<212> PRT
<213> S.epidermidis

<400> 5598
Ser His Arg Glu Tyr Gly Ala Thr Leu Arg Ile Arg Ser Ser Thr Met
1   5   10   15
Asp Ile Gly Leu Leu Ser Thr Ile Phe Arg Phe Ile Ile Phe Leu Val
            20   25   30
Gln Ile Tyr Tyr Phe Gly Met Ile Ile Tyr Phe Phe Thr Ser Trp Val
        35   40   45
Pro Ser Ile Arg Glu Ser Lys Phe Gly Glu Phe Leu Gly Lys Leu Tyr
    50   55   60
Glu Pro Phe Leu Glu Pro Phe Arg Lys Ile Ile Pro Pro Ile Gly Phe
65   70   75   80
Ile Asp Ile Ser Ser Ile Ala Ala Ile Phe Val Leu Val Leu Phe Gln
                85   90   95
Ser Gly Leu Val Lys Ile Phe Asn Leu Ile Leu Ala Tyr Leu Ser
            100   105   110

<210> 5599
<211> 465
<212> PRT
<213> S.epidermidis

<400> 5599
Met Leu Met Glu Glu Asn Lys Asn Gln Pro Asn Lys Glu Asn Met Ser
1   5   10   15
Asn Lys Asp Asp Asn Ala Thr His Leu Asn Asp Ser His Arg Asn Glu
            20   25   30
Asp Leu Glu Leu Phe Arg Arg Asn Lys Asn Ala Arg Gln Arg Arg Arg
        35   40   45
Arg Arg Ile Asp Asn Gln Ser Lys Glu Lys Asp Ala Thr Ser Thr Gln
    50   55   60
Ser Gln Leu Glu Thr Lys Pro Met Asp Lys Phe Ile Asp Asn His Lys
65   70   75   80
Ser His Asn Gln Asn Lys Glu Ile Lys Ser Asp Leu Ile Glu Glu Asn
                85   90   95
Val Asn Asp Glu Asn Asp Asn Gln Lys Asn Ile Asn Asp Lys Leu Asn
            100   105   110
Asp Arg Ile Val Gln Glu Thr Asn Glu Ser Arg Gln Ser Thr Glu Asp
        115   120   125
Asp Glu Glu Phe Pro Leu Asp His Arg Ser Glu Gln Gln Pro Lys Ala
    130   135   140
Ser Arg His Ser Lys Lys His Lys Leu Leu Ser Lys Phe Thr Ser Lys
145   150   155   160
Lys Glu Lys Glu Thr Ser Thr Ser Phe Asn Ser Asn Glu Lys Val Thr
                165   170   175
Gln Ile Lys Pro Leu Ser Leu Glu Glu Lys Arg Ala Ile Arg Arg Lys
            180   185   190
Lys Gln Lys Arg Ile Gln Tyr Thr Ile Ile Thr Leu Leu Ile Leu Ile
        195   200   205
Ile Val Leu Ile Leu Leu Tyr Met Val Thr Pro Leu Ser Lys Ile Ser
    210   215   220
Asn Val Asn Val Lys Gly Asn Asn Asn Val Ser Thr Ser Lys Ile Lys
225   230   235   240
Lys Glu Leu Asn Val Thr Ser Arg Ser Arg Met Tyr Thr Phe Ser Lys
                245   250   255
Asn Lys Ala Ile Arg Asn Leu Lys Gln Asn Pro Leu Ile Lys Glu Val

```
                  260                      265                      270
Asp Ile His Lys Gln Leu Pro Asn Thr Leu Thr Val Asn Val Thr Glu
        275                      280                      285
Tyr Gln Ile Val Gly Leu Glu Lys Asn Lys Asp Lys Tyr Val Pro Ile
        290                      295                      300
Ile Glu Asp Gly Lys Glu Leu Thr Glu Tyr Lys Asp Glu Val Ser His
305                      310                      315                      320
Asp Gly Pro Ile Ile Asp Gly Phe Lys Gly Asp Lys Lys Thr Arg Ile
                325                      330                      335
Ile Lys Ala Leu Ser Glu Met Ser Pro Lys Val Arg Asn Leu Ile Ala
        340                      345                      350
Glu Val Ser Tyr Ala Pro Thr Lys Asn Lys Gln Ser Arg Ile Lys Ile
        355                      360                      365
Phe Thr Lys Asp Asn Met Gln Val Ile Gly Asp Ile Thr Thr Ile Ala
        370                      375                      380
Asp Lys Met Gln Tyr Tyr Pro Gln Met Ser Gln Ser Leu Ser Arg Asp
385                      390                      395                      400
Asp Ser Gly Glu Leu Lys Thr Asn Gly Tyr Ile Asp Leu Ser Val Gly
                405                      410                      415
Ala Ser Phe Ile Pro Tyr Gln Gly Ser Ser Thr Val Gln Ser Gly Thr
                420                      425                      430
Glu Gln Asn Val Thr Lys Ser Thr Gln Glu Glu Asn Asp Ala Lys Glu
        435                      440                      445
Glu Leu Gln Asn Val Leu Asn Lys Ile Asn Lys Gln Ser Lys Glu Asn
        450                      455                      460
Asn
465
```

<210> 5600
<211> 437
<212> PRT
<213> S.epidermidis

<400> 5600
```
Ile Asn Met Glu Asn Glu Gln Met Phe Glu Arg Thr Val Gln Pro Val
1                5                       10                       15
Leu Asp Val Lys Asp Lys Pro Lys Pro Ala Gln Trp Ala Phe Leu Ser
        20                       25                       30
Leu Gln His Leu Phe Ala Met Phe Gly Ser Thr Val Leu Val Pro Phe
        35                       40                       45
Leu Thr His Leu Pro Ile Ser Ala Ala Leu Leu Ala Ser Gly Ile Gly
        50                       55                       60
Thr Leu Leu Tyr Ile Leu Ile Thr Lys Ala Lys Ile Pro Ala Tyr Leu
65                       70                       75                       80
Gly Ser Ser Phe Ala Phe Ile Thr Pro Ile Ile Thr Gly Leu Ser Thr
                85                       90                       95
His Ser Leu Gly Asp Met Leu Val Ala Leu Phe Met Ser Gly Leu Met
                100                      105                      110
Tyr Val Ile Ile Gly Ile Phe Ile Lys Leu Ser Gly Thr His Trp Leu
        115                      120                      125
Met His Leu Leu Pro Pro Val Val Val Gly Pro Val Ile Met Val Ile
        130                      135                      140
Gly Leu Ser Leu Ala Pro Thr Ala Val Asn Met Ala Met Phe Glu Asn
145                      150                      155                      160
Ser Ala Glu Met Lys Gly Tyr Asn Leu Ser Tyr Leu Ile Val Ala Leu
                165                      170                      175
```

Ile Thr Leu Ala Val Thr Ile Ile Val Gln Gly Phe Phe Lys Gly Phe
            180   185   190
Leu Ser Leu Ile Pro Val Leu Ile Gly Ile Ile Val Gly Tyr Ile Val
            195   200   205
Ser Ile Phe Met Gly Ile Val Lys Phe Ala Pro Ile Ala Gln Ala Lys
            210   215   220
Trp Ile Asp Phe Pro His Ile Tyr Leu Pro Phe Lys Asp Tyr Thr Pro
225   230   235   240
Ser Phe His Leu Gly Leu Ile Leu Val Met Ile Pro Val Val Phe Val
            245   250   255
Thr Val Ser Glu His Ile Gly His Gln Met Val Ile Asn Lys Ile Val
            260   265   270
Gly Arg Asn Phe Phe Glu Asn Pro Gly Leu Asp Lys Ser Ile Ile Gly
            275   280   285
Asp Gly Val Ser Thr Met Phe Ala Ser Met Ile Gly Gly Pro Pro Ser
            290   295   300
Thr Thr Tyr Gly Glu Asn Ile Gly Val Leu Ala Ile Thr Lys Ile Tyr
305   310   315   320
Ser Ile Tyr Val Ile Gly Gly Ala Ala Val Ile Ala Ile Ile Leu Ala
            325   330   335
Phe Ile Gly Lys Phe Thr Ala Leu Ile Ser Ser Ile Pro Thr Pro Val
            340   345   350
Met Gly Gly Val Ser Ile Leu Leu Phe Gly Ile Ile Ala Ala Ser Gly
            355   360   365
Leu Arg Met Leu Val Glu Ser Gln Val Asp Phe Ala Ser Asn Arg Asn
            370   375   380
Leu Val Ile Ala Ser Val Val Leu Val Val Gly Ile Gly Asn Leu Leu
385   390   395   400
Ile Asn Leu Lys Gly Ile Gly Ile Asn Leu Gln Ile Glu Gly Met Ala
            405   410   415
Leu Ser Ala Leu Ser Gly Ile Ile Leu Asn Leu Ile Leu Pro Lys Asp
            420   425   430
Lys Asn Gln Ile Asn
            435

<210> 5601
<211> 79
<212> PRT
<213> S.epidermidis

<400> 5601
Ser Asp Val Glu Asn Phe Asp Lys Val Lys Asp Ile Ile Val Asp Arg
1   5   10   15
Leu Gly Val Asp Ala Asp Lys Val Thr Glu Asp Ala Ser Phe Lys Asp
            20   25   30
Asp Leu Gly Ala Asp Ser Leu Asp Ile Ala Glu Leu Val Met Glu Leu
            35   40   45
Glu Asp Glu Phe Gly Thr Glu Ile Pro Asp Glu Glu Ala Glu Lys Ile
            50   55   60
Asn Thr Val Gly Asp Ala Val Lys Tyr Ile Asn Ser Leu Glu Lys
65   70   75

<210> 5602
<211> 167
<212> PRT
<213> S.epidermidis

```
<400> 5602
Lys Phe Arg Glu Trp Ala Phe Met Ile Gln Ile Lys Gly Ala Val Asn
1               5                   10                  15
Phe Pro Ile Ser Leu Asp Ser Thr Thr Trp Ile Phe Asp Asp Arg Lys
            20                  25                  30
Val Thr Ile Asp Asp Leu Glu Arg Gly Val Phe Asp Gly Thr Arg Pro
        35                  40                  45
Ile Asn Phe Asp Asp Asn Lys Glu Trp Asn Arg Ala Ile Leu Glu Gly
        50                  55                  60
Gln Thr Asn Pro Pro Thr Leu Asp Ser Glu Ile Lys Tyr Lys Lys Arg
65                  70                  75                  80
Ser Val Leu Asp Glu Thr Phe Val Ile Asn Met Thr Pro Phe Phe Lys
                85                  90                  95
Asn Ala Glu Pro Met Glu Asn Ala Ser Thr Ile Lys Leu Ser Asn Lys
            100                 105                 110
Asp Tyr Ser Ile Asn Val Pro Met Asp Leu Leu Pro Tyr Leu Phe Phe
        115                 120                 125
Gln Phe Ser Ser Asn Gly Lys Arg Leu Tyr Ser Asp Asn Ala Val Asp
        130                 135                 140
Ser Phe Ile Tyr Ile Pro Glu Glu Gly Tyr Ser His Gln Phe Lys Tyr
145                 150                 155                 160
Val Thr His Ile Glu Val Ile
                165


<210> 5603
<211> 50
<212> PRT
<213> S.epidermidis

<400> 5603
Tyr Tyr Leu Leu Leu Ile Arg Lys Ser Phe Lys Lys Glu Ser Leu Ala
1               5                   10                  15
Tyr Leu Glu Ile Leu Ser Val Ile Tyr Pro Lys Val Gly Tyr Tyr Asp
            20                  25                  30
Lys Ile Thr His Ala His Ala Tyr Gly Gly Pro Ser Cys Cys Tyr Cys
        35                  40                  45
Thr Arg
    50


<210> 5604
<211> 50
<212> PRT
<213> S.epidermidis

<400> 5604
Phe Thr Ile Leu Ile Glu Thr Ser Ile Leu Ile Phe Ile Asn Asp Met
1               5                   10                  15
Ser Arg Tyr Val Asn Asp Lys Ile Glu Thr Ile Ile Asp Thr Glu Phe
            20                  25                  30
Asn Glu Ile Glu Tyr His Cys Asp Ala Ile Tyr Tyr Ile Ile Val Lys
        35                  40                  45
Tyr Cys
    50


<210> 5605
```

<211> 121
<212> PRT
<213> S.epidermidis

<400> 5605
Leu Gly Val Leu Thr Met Asn Lys Phe Ile Lys Tyr Phe Leu Ile Leu
1   5   10   15
Leu Ser Phe Gly Leu Leu Val Val Pro Ile Ile Phe Ala Thr Gln Leu
            20   25   30
Tyr Gln Ser Ser Glu Ser Ala Phe Glu Ser Ser Gln Asn Thr Lys Asp
        35   40   45
Ser Gln Arg Lys Ser Thr Leu Arg Asp Ser Lys Val Asp Pro Glu Lys
    50   55   60
Gln Pro Ile Ser Ile Leu Phe Leu Gly Ile Asp Asp Asn Glu Gly Arg
65   70   75   80
Glu Lys Asn Gly Gln Ser Val Glu His Ser Arg Ser Asp Ala Met Ile
                85   90   95
Leu Ser Thr Phe Asn Gln Lys Lys Leu Gln Lys Arg Lys Leu Ser Ile
                100   105   110
Pro Arg Asp Thr Ile Ser Tyr Ile Pro
            115   120

<210> 5606
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5606
Tyr Thr Pro Leu Ile Ser Leu Thr Ile Arg Pro Val Phe Lys Lys Thr
1   5   10   15
Pro Leu Ile Tyr Ile Phe Leu Ile Ile Leu Tyr Gln Asn Thr Ser Thr
            20   25   30
Tyr Asn Ile Thr Thr Gln Phe Lys Leu Asn Asp Leu Pro Thr Asn Ile
        35   40   45

<210> 5607
<211> 172
<212> PRT
<213> S.epidermidis

<400> 5607
Gln Ile Leu Cys Tyr Leu Lys Lys Glu Asn Asn Met Ser Lys Thr Arg
1   5   10   15
Ala Val Ile Pro Gly Ser Phe Asp Pro Ile Thr Tyr Gly His Leu Asp
            20   25   30
Ile Ile Glu Arg Ser Ala Asp Arg Phe Asp Glu Ile His Val Cys Val
        35   40   45
Leu Lys Asn Ser Ser Lys Gly Gly Thr Phe Asp Ser Glu Glu Arg Met
    50   55   60
Thr Leu Ile Glu Glu Ser Val Lys His Leu Pro Asn Ile Gln Val His
65   70   75   80
His Phe Asn Gly Leu Leu Val Asp Phe Cys Asp Gln Val Gly Ala Lys
                85   90   95
Thr Ile Ile Arg Gly Leu Arg Ala Val Ser Asp Phe Glu Tyr Glu Leu
                100   105   110
Arg Leu Thr Ser Met Asn Lys Lys Leu Asn Ser Asn Ile Glu Thr Met

```
            115                   120                   125
Tyr Met Met Thr Ser Ala Asn Tyr Ser Phe Ile Ser Ser Ser Ile Val
    130                   135                   140
Lys Glu Val Ala Ala Tyr Gln Ala Asp Ile Ser Pro Phe Val Pro Pro
145                   150                   155                   160
His Val Glu Arg Ala Leu Lys Lys Lys Phe Asn Val
                  165                   170
```

<210> 5608
<211> 68
<212> PRT
<213> S.epidermidis

<400> 5608
```
Arg Gln Leu Trp Leu Ser Lys Ser Ile Ser Leu Val Lys Arg Glu Arg
1               5                   10                  15
Asn Arg Ile His Asn Glu Phe Ile Ile Pro Pro Ser Arg Asn Met Thr
              20                  25                  30
Leu Asn Arg Glu Ser Asn Lys Ile Phe Ile Thr Glu Thr Gln Thr Leu
          35                  40                  45
Lys Arg Phe Ile Leu Ser Thr Phe Gln Gly Ser Gln Ser Thr Ala Lys
      50                  55                  60
Arg Phe Asn Gly
65
```

<210> 5609
<211> 1154
<212> PRT
<213> S.epidermidis

<400> 5609
```
Gly Val Ser Trp Leu Leu Lys Gln Ile Lys Lys Leu Leu Val Ala Asn
1               5                   10                  15
Arg Gly Glu Ile Ala Ile Arg Ile Phe Arg Ala Ala Ala Glu Leu Asn
              20                  25                  30
Ile Ser Thr Val Ala Ile Tyr Ser Asn Glu Asp Lys Ser Ser Leu His
          35                  40                  45
Arg Tyr Lys Ala Asp Glu Ser Tyr Leu Val Gly Ser Asp Leu Gly Pro
      50                  55                  60
Ala Glu Ser Tyr Leu Asn Ile Glu Arg Ile Ile Glu Val Ala Leu Arg
65                  70                  75                  80
Ala Gly Val Asp Ala Ile His Pro Gly Tyr Gly Phe Leu Ser Glu Asn
                  85                  90                  95
Glu Gln Phe Ala Arg Arg Cys Ala Glu Glu Gly Ile Lys Phe Ile Gly
              100                 105                 110
Pro His Leu Glu His Leu Asp Met Phe Gly Asp Lys Val Lys Ala Arg
          115                 120                 125
Thr Thr Ala Ile Asn Ala Asn Leu Pro Val Ile Pro Gly Thr Asp Gly
      130                 135                 140
Pro Ile Glu Ser Phe Glu Ala Ala Glu Gln Phe Ala Asn Glu Ala Gly
145                 150                 155                 160
Tyr Pro Leu Met Ile Lys Ala Thr Ser Gly Gly Gly Gly Lys Gly Met
                  165                 170                 175
Arg Ile Val Arg Glu Ser Ser Glu Leu Glu Asp Ala Phe His Arg Ala
              180                 185                 190
Lys Ser Glu Ala Glu Lys Ser Phe Gly Asn Ser Glu Val Tyr Ile Glu
```

```
              195                   200                   205
Arg Tyr Ile Asp Asn Pro Lys His Ile Glu Val Gln Val Ile Gly Asp
    210                   215                   220
Glu Phe Gly Asn Ile Ile His Leu Tyr Glu Arg Asp Cys Ser Val Gln
225                   230                   235                   240
Arg Arg His Gln Lys Val Val Glu Val Ala Pro Ser Val Gly Leu Ser
                245                   250                   255
Asn Lys Leu Arg Glu Arg Ile Cys Asp Ala Ala Ile Gln Leu Met Glu
                260                   265                   270
Asn Ile Lys Tyr Val Asn Ala Gly Thr Val Glu Phe Leu Val Ser Gly
                275                   280                   285
Asp Glu Phe Phe Phe Ile Glu Val Asn Pro Arg Val Gln Val Glu His
        290                   295                   300
Thr Ile Thr Glu Met Ile Thr Gly Ile Asp Ile Val Lys Thr Gln Ile
305                   310                   315                   320
Leu Val Ala Asn Gly Glu Ser Leu Phe Gly Asp Lys Ile Ser Met Pro
                325                   330                   335
Gln Gln Asn Glu Ile Gln Thr Leu Gly Tyr Ala Ile Gln Cys Arg Ile
                340                   345                   350
Thr Thr Glu Asp Pro Thr Asn Asp Phe Met Pro Asp Ser Gly Thr Ile
                355                   360                   365
Ile Ala Tyr Arg Ser Ser Gly Gly Phe Gly Val Arg Leu Asp Ala Gly
        370                   375                   380
Asp Gly Phe Gln Gly Ala Glu Ile Ser Pro Tyr Tyr Asp Ser Leu Leu
385                   390                   395                   400
Val Lys Leu Ser Thr His Ala Val Ser Phe Lys Gln Ala Glu Glu Lys
                405                   410                   415
Met Glu Arg Ser Leu Arg Glu Met Arg Ile Arg Gly Val Lys Thr Asn
                420                   425                   430
Ile Pro Phe Leu Ile Asn Val Met Arg Asn Asp Lys Phe Arg Ser Gly
                435                   440                   445
Asp Tyr Thr Thr Lys Phe Ile Glu Glu Thr Pro Glu Leu Phe Asp Ile
        450                   455                   460
Ala Pro Thr Leu Asp Arg Gly Thr Lys Thr Leu Glu Tyr Ile Gly Asn
465                   470                   475                   480
Val Thr Ile Asn Gly Phe Pro Asn Val Glu Lys Arg Pro Lys Pro Glu
                485                   490                   495
Tyr Glu Ser Thr Lys Ile Pro Lys Ile Ser Gln Lys Lys Ile Asn Gln
                500                   505                   510
Leu Phe Gly Thr Lys Gln Ile Leu Glu Gln His Gly Pro Thr Gly Val
        515                   520                   525
Thr Asn Trp Val Arg Glu Gln Glu Asp Val Leu Ile Thr Asp Thr Thr
        530                   535                   540
Phe Arg Asp Ala His Gln Ser Leu Leu Ala Thr Arg Val Arg Thr Lys
545                   550                   555                   560
Asp Met Met Asn Ile Ala Ser Lys Thr Ala Glu Val Phe Lys Asp Ser
                565                   570                   575
Phe Ser Leu Glu Met Trp Gly Gly Ala Thr Phe Asp Val Ala Tyr Asn
        580                   585                   590
Phe Leu Lys Glu Asn Pro Trp Glu Arg Leu Glu Arg Leu Arg Lys Ala
        595                   600                   605
Ile Pro Asn Val Leu Phe Gln Met Leu Leu Arg Ala Ser Asn Ala Val
        610                   615                   620
Gly Tyr Lys Asn Tyr Pro Asp Asn Val Ile Lys Lys Phe Val His Glu
625                   630                   635                   640
Ser Ala Lys Ala Gly Val Asp Val Phe Arg Ile Phe Asp Ser Leu Asn
```

```
                    645                    650                    655
    Trp Val Asp Gln Met Lys Val Ala Asn Glu Ala Val Gln Glu Ala Gly
                660                    665                    670
    Met Val Ser Glu Gly Thr Ile Cys Tyr Thr Gly Asp Ile Leu Asn Ala
                675                    680                    685
    Glu Arg Ser Asn Ile Tyr Thr Leu Asp Tyr Tyr Val Lys Met Ala Lys
                690                    695                    700
    Glu Leu Glu Arg Glu Gly Phe His Ile Leu Ala Ile Lys Asp Met Ala
    705                    710                    715                    720
    Gly Leu Leu Lys Pro Lys Ala Ala Tyr Glu Leu Ile Gly Glu Leu Arg
                725                    730                    735
    Glu Ala Thr His Leu Pro Ile His Leu His Thr His Asp Thr Ser Gly
                740                    745                    750
    Asn Gly Leu Leu Thr Tyr Lys Gln Ala Ile Asp Ala Gly Val Asp Ile
                755                    760                    765
    Ile Asp Thr Ala Val Ala Ser Met Ser Gly Leu Thr Ser Gln Pro Ser
                770                    775                    780
    Ala Asn Ser Leu Tyr Tyr Ala Leu Asn Gly Phe Pro Arg Asn Leu Arg
    785                    790                    795                    800
    Thr Asp Ile Asp Gly Leu Glu Glu Leu Ser His Tyr Trp Ser Val Val
                805                    810                    815
    Arg Pro Tyr Tyr Ala Asp Phe Glu Ser Asp Ile Lys Ser Pro Asn Thr
                820                    825                    830
    Glu Ile Tyr Gln His Glu Met Pro Gly Gly Gln Tyr Ser Asn Leu Ser
                835                    840                    845
    Gln Gln Ala Lys Ser Leu Gly Leu Gly Glu Arg Phe Asp Glu Val Lys
                850                    855                    860
    Glu Met Tyr Arg Arg Val Asn Phe Leu Phe Gly Asp Leu Val Lys Val
    865                    870                    875                    880
    Thr Pro Ser Ser Lys Val Val Gly Asp Met Ala Leu Tyr Met Val Gln
                885                    890                    895
    Asn Asp Leu Asp Glu Asp Thr Val Ile Asn Asp Gly Tyr Lys Leu Asp
                900                    905                    910
    Phe Pro Glu Ser Val Val Ser Phe Phe Lys Gly Asp Ile Gly Gln Pro
                915                    920                    925
    Val Asn Gly Phe Asn Lys Lys Leu Gln Asp Val Ile Leu Lys Gly Gln
                930                    935                    940
    Gln Pro Ile Thr Glu Arg Pro Gly Glu Tyr Leu Glu Pro Val Asp Phe
    945                    950                    955                    960
    Glu Ala Ile Arg Gln Glu Leu Ser Asp Ile Gln Gln Asp Glu Val Thr
                965                    970                    975
    Glu Gln Asp Ile Ile Ser Tyr Val Leu Tyr Pro Lys Val Tyr Lys Gln
                980                    985                    990
    Tyr Ile Gln Thr Lys Glu Gln Phe Gly Asn Val Ser Leu Leu Asp Thr
                995                    1000                   1005
    Pro Thr Phe Leu Phe Gly Met Arg Asn Gly Glu Thr Val Glu Ile Glu
                1010                   1015                   1020
    Ile Asp Thr Gly Lys Arg Leu Ile Ile Lys Leu Glu Thr Ile Ser Glu
    1025                   1030                   1035                   1040
    Pro Asp Glu Asn Gly Lys Arg Thr Ile Tyr Tyr Ala Met Asn Gly Gln
                1045                   1050                   1055
    Ala Arg Arg Ile Tyr Ile Gln Asp Glu Asn Val Lys Thr Asn Ala Asn
                1060                   1065                   1070
    Val Lys Pro Lys Ala Asp Lys Ser Asn Pro Asn His Ile Gly Ala Gln
                1075                   1080                   1085
    Met Pro Gly Ser Val Thr Glu Val Lys Val Ser Val Gly Asp Glu Val
```

```
     1090                    1095                   1100
Gln Ala Asn Gln Pro Leu Leu Ile Thr Glu Ala Met Lys Met Glu Thr
1105                    1110                   1115                   1120
Thr Ile Gln Ala Pro Phe Asp Gly Ile Ile Lys Gln Ile Asn Val Ala
                   1125                   1130                   1135
Asn Gly Asp Ala Ile Ala Thr Gly Asp Leu Leu Val Glu Ile Glu Lys
                   1140                   1145                   1150
Gln Ser
```

<210> 5610
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5610
```
Ala Asn Thr Cys Arg Ile Tyr His Tyr Lys Cys Trp Leu Ser Leu Val
1               5                   10                  15
Asp Ile Tyr Tyr Cys Tyr Asp Ile Met Asp Ser Ile Leu Arg Cys Arg
                20                  25                  30
Ala Pro Gln Asp Phe Trp Phe Leu His Leu
        35                  40
```

<210> 5611
<211> 77
<212> PRT
<213> S.epidermidis

<400> 5611
```
Leu Ala Asn Cys Phe Trp Phe Arg Phe Arg Lys Phe Leu Lys Val Ile
1               5                   10                  15
Phe Leu Tyr Ser Asn Gln Lys Ile Gln Ile Met Cys Arg His Ile Glu
                20                  25                  30
Leu Leu Leu Thr Ile Phe Tyr Asp Asp Ile Ile Asp Cys Ile Thr Met
        35                  40                  45
Ile Phe Asn Phe Ile Lys Phe Ser Ile Tyr Asn Cys Phe Asn Phe Ile
    50                  55                  60
Ile His Ile Ser Arg His Ile Ile Tyr Glu Asp Glu Tyr
65                  70                  75
```

<210> 5612
<211> 450
<212> PRT
<213> S.epidermidis

<400> 5612
```
Leu Phe Lys Trp Cys Thr Arg Val Val Ser Trp Glu Ser Ser Ile Met
1               5                   10                  15
Met Lys Ser Val Arg Thr Tyr Ala Leu Glu Thr Ile Asn Asp Val Leu
                20                  25                  30
Asn Lys Gly Ala Tyr Ser Asn Leu Lys Ile Asn Glu Val Leu Ser Thr
        35                  40                  45
Asn Asn Ile Asn Thr Val Asp Lys Asn Leu Phe Thr Glu Leu Val Tyr
    50                  55                  60
Gly Thr Ile Lys Arg Lys Tyr Thr Leu Asp Tyr Leu Leu Lys Pro Phe
65                  70                  75                  80
```

Ile Lys Thr Lys Ile Lys Ser Trp Val Arg Gln Leu Leu Trp Met Ser
                85   90   95
Leu Tyr Gln Tyr Leu Tyr Leu Asp Lys Ile Pro Asn His Ala Ile Ile
            100   105   110
His Glu Ala Val Asp Ile Ala Lys Lys Arg Gly Gly Phe His Thr Gly
        115   120   125
Asn Ile Val Asn Gly Ile Leu Arg Thr Val Met Arg Thr Glu Leu Pro
    130   135   140
Ser Phe Glu Asp Ile Asp Asp Thr Lys Lys Arg Ile Ala Ile Gln Tyr
145   150   155   160
Ser Leu Pro Lys Trp Ile Val Asp His Trp Val Thr His Phe Gly Val
            165   170   175
Glu Lys Thr Glu Asn Ile Ala Arg Ser Phe Leu Glu Pro Val Thr Thr
        180   185   190
Thr Val Arg Ala Asn Ile Ser Arg Asp Ser Ile Asp Ser Ile Ile Ser
        195   200   205
Lys Leu Glu Gln Glu Gly Tyr His Val Lys Lys Asp Asp Met Leu Pro
    210   215   220
Phe Cys Leu His Ile Ser Gly Met Pro Val Val Asn Ser Asn Ala Phe
225   230   235   240
Lys Glu Gly Tyr Ile Ser Ile Gln Asp Lys Ser Ser Met Met Val Ala
            245   250   255
Tyr Val Met Asn Leu Gly Arg Asp Asp Lys Val Leu Asp Ala Cys Ser
            260   265   270
Ala Pro Gly Gly Lys Ala Cys His Met Ala Glu Ile Leu Ser Pro Glu
            275   280   285
Gly His Val Asp Ala Thr Asp Ile His Glu His Lys Ile Asn Leu Ile
            290   295   300
Lys Gln Asn Ile Lys Lys Leu Lys Leu Asn Asn Ile Lys Ala Phe Gln
305   310   315   320
His Asp Ala Thr Glu Val Tyr Asp Lys Met Tyr Asp Lys Ile Leu Val
            325   330   335
Asp Ala Pro Cys Ser Gly Leu Gly Val Leu Arg His Lys Pro Glu Ile
            340   345   350
Lys Tyr Ser Gln Ser Gln Asn Ser Ile Lys Ser Leu Val Glu Leu Gln
            355   360   365
Leu Gln Ile Leu Glu Asn Val Lys Asp Asn Ile Lys Pro Gly Gly Thr
    370   375   380
Ile Val Tyr Ser Thr Cys Thr Ile Glu Gln Met Glu Asn Glu Asn Val
385   390   395   400
Ile Tyr Thr Phe Leu Lys Arg His Lys Asp Phe Glu Phe Glu Pro Phe
            405   410   415
Gln Asn Pro Ala Thr Gly Glu Gln Val Lys Thr Leu Gln Ile Leu Pro
            420   425   430
Gln Asp Phe Asn Ser Asp Gly Phe Phe Ile Ser Lys Ile Lys Arg Lys
            435   440   445
Glu Ser
    450

<210> 5613
<211> 383
<212> PRT
<213> S.epidermidis

<400> 5613
Ser Gln Lys Trp Arg Lys Cys Lys Met Asn Phe Ser Lys Leu Lys Phe

```
1                   5                   10                  15
Gly Ala Thr Ile Gly Ile Ile Gly Gly Gly Gln Leu Gly Lys Met Met
                20                  25                  30
Ala Gln Ser Ala Gln Lys Met Gly Tyr Lys Val Ile Val Leu Asp Pro
            35                  40                  45
Asn Glu Asp Cys Pro Cys Arg Tyr Val Ala His Gln Phe Ile His Ala
        50                  55                  60
Asn Tyr Asp Asp Glu Gln Ala Leu Asn Gln Leu Gly Glu Asn Ser Asp
65                  70                  75                  80
Val Val Thr Tyr Glu Phe Glu Asn Ile Ser Ser Glu Gln Leu Lys Lys
                85                  90                  95
Leu Thr Gln Leu Tyr His Ile Pro Gln Gly Tyr Gln Ala Ile Glu Leu
            100                 105                 110
Leu Gln Asp Arg Leu Thr Glu Lys Gln Thr Leu Leu Glu Ala Asn Thr
        115                 120                 125
Gln Ile Val Pro Phe Val Gln Ile His Thr Asn Gln Asp Leu Leu Lys
    130                 135                 140
Ala Ile Glu Lys Leu Gly Phe Pro Cys Ile Val Lys Thr Arg Phe Gly
145                 150                 155                 160
Gly Tyr Asp Gly Lys Gly Gln Ile Leu Val Arg Asn Asp Ser Glu Leu
                165                 170                 175
Asp Glu Ala Tyr Gln Leu Val Glu Lys Gln Glu Cys Val Ala Glu Gln
            180                 185                 190
Tyr Leu Asp Ile Gln Lys Glu Val Ser Leu Thr Val Thr Ile Gly Asn
            195                 200                 205
Glu Gln Gln Thr Thr Tyr Phe Pro Leu Gln Glu Asn Glu His Gln Asn
        210                 215                 220
Gln Ile Leu Phe Lys Thr Val Val Pro Ala Arg Ser Asp Lys Glu Asn
225                 230                 235                 240
Glu Ala Arg Lys Glu Val Glu Lys Ile Thr Arg Ala Ile His Phe Val
                245                 250                 255
Gly Thr Phe Thr Val Glu Phe Phe Ile Asp Lys Glu Asn Asn Leu Tyr
            260                 265                 270
Val Asn Glu Ile Ala Pro Arg Pro His Asn Ser Gly His Tyr Ser Ile
            275                 280                 285
Glu Ala Cys Asp Tyr Ser Gln Phe Asp Thr His Ile Leu Ala Ile Thr
        290                 295                 300
Gly Gln Lys Leu Pro Gln Ala Ile Glu Leu Leu Lys Pro Thr Val Met
305                 310                 315                 320
Met Asn Leu Leu Gly Arg Asp Leu Asp Leu Leu Glu Asn Glu Phe Ser
                325                 330                 335
Arg His Pro Asp Trp His Ile His Ile Tyr Gly Lys Lys Glu Arg Lys
            340                 345                 350
Pro Asp Arg Lys Met Gly His Met Thr Leu Leu Thr Asp Asp Val Asn
        355                 360                 365
Gln Thr Glu Gln Tyr Met Leu Met Lys Phe Glu Gly Arg Asp Lys
    370                 375                 380
```

```
<210> 5614
<211> 668
<212> PRT
<213> S.epidermidis

<400> 5614
Ser Trp Arg Trp Thr Leu Met Asn Phe Pro Trp Asp Gln Leu Leu Val
1                   5                   10                  15
```

```
Lys Gly Asn Trp Met Ile Ile Ser Ala Gln Ile Ala Ala Pro Phe Leu
        20                      25                      30
Val Ile Gly Leu Ile Ala Val Ile Ser Tyr Phe Lys Leu Trp Lys Tyr
        35                      40                      45
Leu Tyr Lys Glu Trp Phe Thr Ser Val Asp His Lys Lys Ile Gly Ile
        50                      55                      60
Met Tyr Leu Ile Ser Ala Val Leu Met Phe Val Arg Gly Gly Ile Asp
65                      70                      75                      80
Ala Leu Met Leu Arg Thr Gln Leu Thr Ile Pro Asp Asn Lys Phe Leu
                85                      90                      95
Glu Ala Asn His Tyr Asn Glu Val Phe Thr Thr His Gly Val Ile Met
                100                     105                     110
Ile Ile Phe Met Ala Met Pro Phe Ile Phe Gly Leu Trp Asn Val Val
                115                     120                     125
Ile Pro Leu Gln Leu Gly Ala Arg Asp Val Ala Phe Pro Val Met Asn
        130                     135                     140
Asn Val Ser Phe Trp Leu Phe Phe Ala Gly Met Ile Leu Phe Asn Leu
145                     150                     155                     160
Ser Phe Ile Val Gly Gly Ser Pro Ala Ala Gly Trp Thr Asn Tyr Ala
                165                     170                     175
Pro Leu Ala Gly Glu Phe Ser Pro Gly Pro Gly Val Asn Tyr Tyr Leu
                180                     185                     190
Ile Ala Ile Gln Ile Ser Gly Ile Gly Ser Leu Met Thr Gly Ile Asn
                195                     200                     205
Phe Phe Val Thr Ile Leu Arg Cys Lys Thr Pro Thr Met Lys Phe Met
        210                     215                     220
Gln Met Pro Met Phe Ser Val Thr Thr Phe Ile Thr Thr Leu Ile Val
225                     230                     235                     240
Ile Leu Ala Phe Pro Val Phe Thr Val Ala Leu Ala Leu Met Thr Ala
                245                     250                     255
Asp Arg Ile Phe Gly Thr Gln Phe Phe Thr Val Ala Asn Gly Gly Met
                260                     265                     270
Pro Met Leu Trp Ala Asn Phe Phe Trp Val Trp Gly His Pro Glu Val
        275                     280                     285
Tyr Ile Val Ile Leu Pro Ala Phe Gly Met Tyr Ser Glu Ile Ile Pro
290                     295                     300
Thr Phe Ala Arg Lys Arg Leu Phe Gly His Gln Ser Met Ile Trp Ala
305                     310                     315                     320
Thr Ala Gly Ile Ala Phe Leu Ser Phe Leu Val Trp Val His His Phe
                325                     330                     335
Phe Thr Met Gly Asn Gly Ala Leu Ile Asn Ser Phe Phe Ser Ile Ser
                340                     345                     350
Thr Met Leu Ile Gly Val Pro Thr Gly Val Lys Leu Phe Asn Trp Leu
        355                     360                     365
Leu Thr Leu Tyr Lys Gly Arg Ile Thr Phe Glu Ser Pro Met Leu Phe
        370                     375                     380
Ser Leu Ala Phe Ile Pro Asn Phe Leu Leu Gly Gly Val Thr Gly Val
385                     390                     395                     400
Met Leu Ala Met Ala Ser Ala Asp Tyr Gln Tyr His Asn Thr Tyr Phe
                405                     410                     415
Leu Val Ala His Phe His Tyr Thr Leu Val Thr Gly Val Val Phe Ala
                420                     425                     430
Cys Leu Ala Gly Leu Ile Phe Trp Tyr Pro Lys Met Met Gly Tyr Lys
        435                     440                     445
Leu Asn Glu Thr Leu Asn Lys Trp Cys Phe Trp Phe Phe Met Ile Gly
        450                     455                     460
```

```
Phe Asn Val Cys Phe Leu Pro Gln Phe Ile Leu Gly Leu Asp Gly Met
465                 470             475                 480
Pro Arg Arg Leu Tyr Thr Tyr Met Pro Ser Asp Gly Trp Trp Leu Leu
                485             490             495
Asn Phe Ile Ser Thr Ile Gly Ala Val Leu Met Ala Ile Gly Phe Leu
                500             505             510
Phe Leu Val Ala Ser Ile Val Tyr Ser His Ile Lys Ala Pro Arg Glu
            515             520             525
Ala Thr Gly Asp Asn Trp Asp Gly Leu Gly Arg Thr Leu Glu Trp Ser
    530             535             540
Thr Ala Ser Ala Ile Pro Pro Lys Tyr Asn Phe Ala Ile Thr Pro Asp
545             550             555             560
Trp Asn Asp Tyr Asp Thr Phe Val Asp Met Lys Glu His Gly Arg His
                565             570             575
Tyr Leu Asp Asn His Asn Tyr Lys Asp Ile His Met Pro Asn Asn Thr
            580             585             590
Pro Val Gly Phe Trp Met Gly Ile Phe Met Thr Ile Gly Gly Phe Phe
            595             600             605
Leu Ile Phe Glu Ser Ile Val Pro Ala Leu Ile Cys Leu Ala Gly Ile
    610             615             620
Phe Ile Thr Met Ile Trp Arg Ser Phe Gln Ile Asp His Gly Tyr His
625             630             635             640
Ile Pro Ala Ser Glu Val Ala Glu Thr Glu Ala Arg Leu Arg Glu Ala
            645             650             655
Arg Ile Lys Glu Arg Glu Ala Val Ser His Glu Ser
            660             665
```

<210> 5615
<211> 56
<212> PRT
<213> S.epidermidis

<400> 5615

```
Lys Leu Leu Arg Ile Glu Ile Arg Ile Lys Ala Ile Asp Pro Gly Thr
1               5               10              15
Asn Lys Thr Val Pro Lys Tyr Leu Ala Glu Ser Gly Lys Lys Pro Ile
            20              25              30
Asn Pro Thr Lys Lys Lys Thr Lys Lys Thr Phe Val Thr Ser Gln Thr
        35              40              45
Gly Leu Arg Tyr Leu Trp Ile Lys
    50              55
```

<210> 5616
<211> 566
<212> PRT
<213> S.epidermidis

<400> 5616

```
Cys Gly Glu Arg Arg Ile Met Lys Gln Leu His Ser Asn Glu Val Gly
1               5               10              15
Val Tyr Ala Leu Gly Gly Leu Gly Glu Val Gly Lys Asn Thr Tyr Ala
            20              25              30
Val Glu Tyr Lys Asp Glu Ile Val Ile Ile Asp Ala Gly Ile Lys Phe
        35              40              45
Pro Asp Asp Asn Leu Leu Gly Ile Asp Tyr Val Ile Pro Asp Tyr Thr
    50              55              60
```

```
Tyr Leu Glu Gln Asn Gln Asp Lys Ile Val Gly Leu Phe Ile Thr His
65                  70              75                  80
Gly His Glu Asp His Ile Gly Gly Val Pro Phe Leu Leu Lys Gln Ile
                85              90                  95
Asn Val Pro Ile Tyr Gly Gly Pro Leu Ala Leu Gly Leu Ile Arg Asn
            100             105             110
Lys Leu Glu Glu His His Leu Leu Arg Thr Thr Glu Leu His Glu Ile
        115             120             125
Asp Glu Ser Ser Val Ile Lys Ser Lys His Phe Glu Ile Ser Phe Tyr
    130             135             140
Leu Thr Thr His Ser Ile Pro Glu Ala Tyr Gly Val Ile Val Asp Thr
145             150             155                 160
Pro Glu Gly Lys Ile Val His Thr Gly Asp Phe Lys Phe Asp Phe Thr
            165             170             175
Pro Val Gly Glu Pro Ala Asn Ile Ala Lys Met Ala Gln Leu Gly His
        180             185             190
Glu Gly Val Leu Cys Leu Leu Ser Asp Ser Thr Asn Ala Leu Val Pro
    195             200             205
Asp Phe Thr Leu Ser Glu Arg Glu Val Gly Gln Asn Val Asp Lys Ile
    210             215             220
Phe Arg Asn Cys Lys Gly Arg Ile Ile Phe Ala Thr Phe Ala Ser Asn
225             230             235                 240
Ile Tyr Arg Val Gln Gln Ala Val Glu Ala Ala Ile Lys Tyr Asn Arg
            245             250             255
Lys Ile Val Thr Phe Gly Arg Ser Met Glu Asn Asn Ile Lys Ile Gly
            260             265             270
Met Glu Leu Gly Tyr Ile Lys Ala Pro Pro Glu Thr Phe Ile Glu Pro
    275             280                 285
Asn Lys Ile Asn Ser Val Pro Lys His Glu Leu Leu Ile Leu Cys Thr
    290             295             300
Gly Ser Gln Gly Glu Pro Met Ala Ala Leu Ser Arg Ile Ala Asn Gly
305             310             315                 320
Thr His Lys Gln Ile Lys Ile Ile Pro Glu Asp Thr Val Val Phe Ser
            325             330             335
Ser Ser Pro Ile Pro Gly Asn Thr Lys Ser Ile Asn Arg Thr Ile Asn
            340             345             350
Ala Leu Tyr Lys Ala Gly Ala Asp Val Ile His Ser Lys Ile Ser Asn
    355             360             365
Ile His Thr Ser Gly His Gly Ser Gln Gly Asp Gln Gln Leu Met Leu
    370             375             380
Arg Leu Ile Gln Pro Lys Tyr Phe Leu Pro Ile His Gly Glu Tyr Arg
385             390             395                 400
Met Leu Lys Ala His Gly Glu Thr Gly Val Gln Cys Gly Val Asp Glu
            405             410             415
Asp Asn Val Phe Ile Phe Asp Ile Gly Asp Val Leu Ala Leu Thr His
            420             425             430
Asp Ser Ala Arg Lys Ala Gly Arg Ile Pro Ser Gly Asn Val Leu Val
    435             440             445
Asp Gly Ser Gly Ile Gly Asp Ile Gly Asn Val Val Ile Arg Asp Arg
    450             455             460
Lys Leu Leu Ser Glu Glu Gly Leu Val Ile Val Val Ser Ile Asp
465             470             475                 480
Phe Asn Thr Asn Lys Leu Leu Ser Gly Pro Asp Ile Ile Ser Arg Gly
            485             490             495
Phe Val Tyr Met Arg Glu Ser Gly Gln Leu Ile Tyr Asp Ala Gln Arg
            500             505             510
```

```
Lys Ile Lys Gly Asp Val Ile Ser Lys Leu Asn Ser Asn Lys Asp Ile
    515                 520                 525
Gln Trp His Gln Ile Lys Ser Ser Ile Ile Glu Thr Leu His Pro Tyr
    530                 535                 540
Leu Tyr Glu Lys Thr Ala Arg Lys Pro Met Ile Leu Pro Val Ile Met
545                 550                 555                 560
Lys Val Asn Glu Asp Lys
                565
```

<210> 5617
<211> 58
<212> PRT
<213> S.epidermidis

<400> 5617
```
Asp Lys Trp Arg Val Ser Ile Tyr Leu Ser Ile Asn Arg Pro Ser Lys
1               5                   10                  15
Tyr His Ile Asn Leu Asp Gly His Phe Asn Tyr Asp Cys Phe Ser Ile
            20                  25                  30
Ser Thr Asn Lys Ser Pro Val Ala Met Ala Ser Pro Leu Ala Thr Leu
        35                  40                  45
Ile Cys Leu Ile Ile Pro Ser Asn Gly Ala
    50                  55
```

<210> 5618
<211> 466
<212> PRT
<213> S.epidermidis

<400> 5618
```
Pro Asn Ile Leu Phe Arg Leu Ile Tyr Ser His Ile Leu Met Gly Val
1               5                   10                  15
Ile Leu Leu Asn Ser Asn Asn Asn Asn His Glu Gln Gln Arg Ser Leu
            20                  25                  30
Asp Glu Ile Asn Asn Thr Ile Asn Phe Asn His Asn Asp Ser Ala Ser
            35                  40                  45
Gln Lys Phe Leu Ala Phe Leu Gly Pro Gly Leu Leu Val Ala Val Gly
    50                  55                  60
Tyr Met Asp Pro Gly Asn Trp Ile Thr Ser Met Gln Gly Gly Ala Gln
65                  70                  75                  80
Tyr Gly Tyr Thr Leu Leu Phe Ile Ile Leu Ile Ser Ser Leu Ser Ala
            85                  90                  95
Met Leu Leu Gln Ser Met Thr Val Arg Leu Gly Ile Ala Thr Gly Met
            100                 105                 110
Asp Leu Ala Gln Met Thr Arg His Phe Leu Asn Lys Pro Val Ala Ile
            115                 120                 125
Met Phe Trp Ile Ile Ala Glu Leu Ala Ile Ile Ala Thr Asp Ile Ala
            130                 135                 140
Glu Val Ile Gly Ser Ala Ile Ala Leu Asp Leu Ile Phe Gly Ile Pro
145                 150                 155                 160
Leu Ile Val Gly Ala Leu Ile Thr Val Phe Asp Val Phe Leu Leu Leu
            165                 170                 175
Phe Ile Met Lys Phe Gly Phe Arg Lys Ile Glu Ala Ile Val Gly Thr
            180                 185                 190
Leu Ile Phe Thr Val Leu Ala Ile Phe Val Phe Glu Val Tyr Ile Ser
            195                 200                 205
```

```
Ser Pro His Ile Ile Asp Met Leu Asn Gly Phe Val Pro His Lys Glu
    210                 215                 220
Ile Ile Thr Asn Gln Gly Ile Leu Tyr Ile Ala Leu Gly Ile Ile Gly
225                 230                 235                 240
Ala Thr Ile Met Pro His Asn Leu Tyr Leu His Ser Ser Ile Val Gln
                245                 250                 255
Ser Arg Lys Tyr Asp Arg His Ser Ile His Glu Lys Ala Gln Ala Ile
                260                 265                 270
Lys Tyr Ala Thr Ile Asp Ser Asn Ile Gln Leu Ser Ile Ala Phe Val
                275                 280                 285
Val Asn Cys Leu Leu Leu Thr Leu Gly Ala Ala Leu Phe Phe Gly Thr
    290                 295                 300
Lys Thr Glu Asp Leu Gly Gly Phe Tyr Asp Leu Tyr Leu Ala Leu Lys
305                 310                 315                 320
Thr Glu Pro Ala Leu Gly Ala Thr Leu Gly Gly Ile Met Ser Thr Leu
                325                 330                 335
Phe Ala Val Ala Leu Leu Ala Ser Gly Gln Asn Ser Thr Ile Thr Gly
                340                 345                 350
Thr Leu Ala Gly Gln Ile Val Met Glu Gly Phe Leu Lys Leu Ser Ile
    355                 360                 365
Pro Asn Trp Leu Arg Arg Leu Ile Thr Arg Ser Leu Ala Val Ile Pro
    370                 375                 380
Val Ile Ile Cys Leu Ile Val Phe Lys Gly Asn Thr Glu Lys Ile Glu
385                 390                 395                 400
Gln Leu Leu Val Phe Ser Gln Val Phe Leu Ser Ile Ala Leu Pro Phe
                405                 410                 415
Ser Leu Ile Pro Leu Gln Leu Ala Thr Ser Asn Gln Asn Leu Met Gly
                420                 425                 430
Pro Phe Lys Asn Lys Thr Trp Ile Asn Ile Ile Ser Trp Leu Leu Ile
                435                 440                 445
Ile Val Leu Ser Gly Leu Asn Val Tyr Leu Ile Ile Gln Thr Phe Gln
    450                 455                 460
Glu Leu
465
```

<210> 5619
<211> 77
<212> PRT
<213> S.epidermidis

<400> 5619

```
Val Asp Lys Leu Gly Ala Ile Leu Thr Ile Ile Lys Asn Tyr Gln Tyr
1               5                   10                  15
Arg Leu Lys Leu Tyr Met Ile Ile Asn His Arg Leu Ser Tyr Phe Tyr
                20                  25                  30
Asn Tyr Asn Asp Phe Leu Phe Phe Ile Ser Leu Tyr Ala Cys Ser Ala
            35                  40                  45
Ala Phe Cys Ser Asp Ser Phe Phe Val Phe Pro Leu Pro Ser Ala Thr
    50                  55                  60
Ala Leu Phe Ser Lys Ile Thr Ser Asp Val Asn Ser Leu
65                  70                  75
```

<210> 5620
<211> 299
<212> PRT
<213> S.epidermidis

<400> 5620
```
Val Cys Ile Leu Asn Gln Lys Gln Tyr Thr Ser Trp Tyr Gln Val Lys
1               5                   10                  15
Leu Lys Lys Asn Leu Ile Ser Glu Leu Lys Val Met Arg Thr Ile Ile
            20                  25                  30
Met His Asn Ile Asn Lys Trp Leu Leu Val Pro Tyr Leu Leu Trp Met
        35                  40                  45
Val Ile Phe Ile Ile Ile Pro Val Ile Leu Leu Val Tyr Phe Ser Phe
    50                  55                  60
Ile Asp Ile His Gly His Phe Ser Phe Thr Asn Tyr Glu Gln Val Phe
65                  70                  75                      80
Ser Thr Arg Tyr Leu Lys Met Phe Ile Asp Ser Ile Trp Tyr Ala Ala
            85                  90                  95
Leu Ile Thr Met Ile Thr Leu Ile Ile Ser Tyr Pro Ala Ala Tyr Phe
            100                 105                 110
Ile Ser Tyr Ser Arg Phe Gln Asn Ile Leu Leu Met Leu Leu Ile Ile
            115                 120                 125
Pro Thr Trp Ile Asn Leu Leu Leu Lys Thr Tyr Ala Phe Ile Gly Leu
    130                 135                 140
Leu Gly His Asp Gly Val Ile Asn Gln Ala Leu His Ile Phe Gln Ile
145                 150                 155                     160
Pro Lys Leu Asn Leu Leu Phe Thr Ser Gly Ala Phe Leu Leu Val Ala
            165                 170                 175
Ser Tyr Ile Tyr Ile Pro Phe Met Ile Leu Pro Ile Phe Asn Ser Met
            180                 185                 190
Lys Ala Ile Pro Asn Asn Ile Leu Gln Ala Ser Asn Asp Leu Gly Ala
            195                 200                 205
Ser Thr Phe Thr Thr Phe Arg Lys Val Ile Val Pro Leu Thr Arg Glu
    210                 215                 220
Gly Ile Lys Thr Gly Val Gln Val Thr Phe Ile Pro Ala Leu Ser Leu
225                 230                 235                     240
Phe Met Ile Thr Arg Leu Ile Ala Gly Asn Lys Val Ile Asn Val Gly
            245                 250                 255
Thr Ala Ile Glu Glu Gln Phe Leu Thr Ile Gln Asn Tyr Gly Leu Gly
            260                 265                 270
Ser Thr Ile Ala Leu Phe Leu Ile Ile Phe Met Ala Phe Leu Leu Ile
            275                 280                 285
Ile Thr Lys Ser Lys Ser Ser Asn Gly Lys Gly
    290                 295             .
```

<210> 5621
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5621
```
Leu Glu Tyr Arg Asn Ile Thr Leu Arg Asn Phe Leu Asn Leu Asn Gln
1               5                   10                  15
Lys Gln Leu Ala Ser Tyr Arg Arg Asn Met Ile Cys Ile Lys Gly Thr
            20                  25                  30
Tyr Ile Ser Lys Ile Val Tyr Gln Gln Ala Tyr Tyr Ser Leu Lys Ile
        35                  40                  45
Ile Lys Glu Thr Ile Ser Ile
    50                  55
```

```
<210> 5622
<211> 100
<212> PRT
<213> S.epidermidis

<400> 5622
Lys Val Phe Arg Thr Lys Asn Lys Lys His Leu Gln Ser Arg Lys Ile
1               5                   10                  15
Asp Val Glu Pro Val Phe Gly Phe Met Lys Ala Ile Leu Gly Phe Thr
            20                  25                  30
Arg Met Ser Val Arg Gly Ile Asn Lys Val Lys Arg Glu Leu Gly Phe
            35                  40                  45
Val Leu Met Ala Leu Asn Ile Arg Lys Val Thr Ala Gln Arg Ala Glu
        50                  55                  60
Asn Asn Gln Lys Asn Asn Lys Lys Asp Asn Phe Tyr Ile Ile Ser Ile
65                  70                  75                  80
Glu Ile Val Phe Phe Ile Tyr Leu Gly Thr Leu Ser Pro Thr Leu Phe
                85                  90                  95
Ile Tyr Val Arg
            100


<210> 5623
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5623
Val His Phe Arg Val Val Asn Leu Leu Arg Arg Asp Leu Met Ala Lys
1               5                   10                  15
Thr Ser His Leu Tyr Phe Arg Phe Ile Asp Asp Leu Phe Ile Ile Ile
            20                  25                  30
Ile His Lys Leu Ile Ile Lys Leu Lys Lys
            35                  40


<210> 5624
<211> 591
<212> PRT
<213> S.epidermidis

<400> 5624
His Glu Val Arg Thr Asn Ser Asn Val Asn Val Met Ser Trp Ser Ser
1               5                   10                  15
Phe Tyr Gly Val Ile Leu Met Thr Lys Lys Asp Val Ile Gln Leu Leu
            20                  25                  30
Glu Lys Ile Ala Ile Tyr Met Glu Leu Lys Gly Glu Asn Thr Phe Lys
            35                  40                  45
Val Ser Ala Tyr Arg Lys Ala Ala Gln Ser Leu Glu Val Asp Glu Arg
        50                  55                  60
Thr Leu Glu Glu Ile Asp Asp Val Thr Glu Leu Lys Gly Ile Gly Lys
65                  70                  75                  80
Gly Val Gly Glu Val Ile Asn Glu Phe Lys Thr Gln Gly Gln Ser Ser
                85                  90                  95
Thr Leu Gln Thr Leu Gln Asp Glu Val Pro Glu Gly Leu Val Pro Leu
            100                 105                 110
Leu Lys Ile Gln Gly Leu Gly Ser Lys Lys Ile Ala Lys Leu Tyr His
            115                 120                 125
```

```
Glu Leu Gln Ile Thr Asp Lys Glu Thr Leu Gln Gln Ala Cys Glu Glu
    130                 135                 140
Gly Lys Val Ser Thr Leu Lys Gly Phe Ala Lys Lys Thr Glu Gln Asn
145              150                 155                 160
Ile Leu Glu Ala Val Lys Ser Ile Gly Ala Lys Lys Asp Arg Tyr Pro
                165                 170                 175
Ile Glu Leu Met Arg Gly Leu Asn Gln Glu Ile Val Lys Phe Ile Glu
            180                 185                 190
Gln Leu Glu Gly Val Glu Gln Tyr Ser Thr Ala Gly Ser Phe Arg Arg
        195                 200                 205
Tyr Lys Glu Met Ser Lys Asp Leu Asp Phe Ile Ile Ser Thr Ser Glu
    210                 215                 220
Pro Lys Lys Val Gln Gln Gln Leu Leu Arg Ile Pro Asn Lys Val Lys
225                 230                 235                 240
Asp Val Ala Val Gly Asp Thr Lys Ile Ser Leu Glu Leu Ala Tyr Asp
                245                 250                 255
Asp Glu Thr Ile Gly Val Asp Phe Arg Leu Ile Glu Pro Ala Ala Phe
            260                 265                 270
Tyr His Thr Leu Gln His Phe Thr Gly Ser Lys Asp His Asn Ile Arg
            275                 280                 285
Ile Arg Gln Leu Ala Lys Ala Arg Asp Glu Lys Val Ser Glu Tyr Gly
    290                 295                 300
Ile Glu Gln Gln Asp Gly Lys Leu Leu Gln Leu Gln Ser Glu Glu Ala
305                 310                 315                 320
Ile Tyr His His Phe Gly Val Asp Trp Ile Ala Pro Ala Met Arg Glu
                325                 330                 335
Asp Gly Ser Glu Phe Asp Lys Asp Leu Ser Gln Ile Ile Gln Leu Asp
            340                 345                 350
Asp Ile Asn Gly Asp Leu His Met His Thr Thr Tyr Ser Asp Gly Ala
            355                 360                 365
Phe Ser Ile Lys Glu Met Ile Glu Ala Asn Ile Glu Lys Gly Tyr Glu
    370                 375                 380
Phe Met Val Ile Thr Asp His Ser Gln Ser Leu Lys Val Ala His Gly
385                 390                 395                 400
Leu Gln Val Asp Arg Leu Leu Arg Gln Asn Glu Glu Ile Lys Gln Leu
                405                 410                 415
Asn Glu Glu Tyr Lys Glu Ile Asp Ile Tyr Ser Gly Thr Glu Met Asp
            420                 425                 430
Ile Leu Pro Asp Gly Thr Leu Asp Tyr Asp Asp Glu Val Leu Ala Gln
    435                 440                 445
Leu Asp Tyr Val Ile Ala Ala Ile His Gln Asn Phe Asn Gln Ser Glu
    450                 455                 460
Asp Glu Ile Met Lys Arg Leu Glu Thr Ala Cys Arg Asn Pro Tyr Val
465                 470                 475                 480
Arg His Ile Ala His Pro Thr Gly Arg Ile Ile Gly Arg Arg Lys Gly
                485                 490                 495
Tyr Lys Ala Asn Ile Glu Lys Leu Met Asn Leu Ala Glu Glu Thr Asn
            500                 505                 510
Thr Ile Leu Glu Ile Asn Ala Asn Pro His Arg Leu Asp Leu Asn Ala
        515                 520                 525
Glu Ile Val Arg Lys Tyr Pro Lys Val Lys Leu Thr Ile Asn Thr Asp
    530                 535                 540
Ala His His Thr Asn His Leu Asp Phe Met Lys Tyr Gly Val Ala Thr
545                 550                 555                 560
Ala Gln Lys Gly Phe Val Asn Lys Glu Arg Val Ile Asn Thr Met Thr
                565                 570                 575
```

Lys Glu Ala Phe Arg Ser Phe Val Glu Thr Asn Lys Tyr Lys Lys
            580   585   590

<210> 5625
<211> 573
<212> PRT
<213> S.epidermidis

<400> 5625
Lys Ser Ile Arg Trp Gln Ile Ile Met Ala Tyr Asp Gly Leu Phe Thr
1   5   10   15
Lys Lys Met Ile Glu Ser Leu Gln Gly Leu Val Ser Gly Arg Ile His
            20   25   30
Lys Ile Asn Gln Pro Glu Asn Asp Thr Ile Ile Ile Val Ile Arg Gln
            35   40   45
Asn Arg Lys Asn His Gln Leu Leu Leu Ser Ile His Pro Ser Phe Ser
            50   55   60
Arg Leu Gln Leu Thr Thr Lys Lys Tyr Asp Asn Pro Phe Thr Pro Pro
65   70   75   80
Met Phe Ala Arg Val Phe Arg Lys His Leu Glu Gly Gly Phe Ile Lys
                85   90   95
Ala Ile Arg Gln Val Gly Asn Asp Arg Arg Ile Glu Ile Asp Ile Glu
            100   105   110
Ser Lys Asp Glu Ile Gly Asp Thr Ile Tyr Arg Thr Ile Ile Leu Glu
            115   120   125
Ile Met Gly Lys His Ser Asn Leu Ile Leu Val Asp Asp Gln Arg Lys
            130   135   140
Ile Ile Glu Gly Phe Lys His Leu Thr Pro Asn Thr Asn Gln Tyr Arg
145   150   155   160
Thr Val Met Pro Gly Phe Lys Tyr Glu Ala Pro Pro Asn Gln Asn Lys
                165   170   175
Ile Asn Pro Tyr Glu Leu Thr Gly Gln Glu Val Leu Lys Tyr Ile Asp
                180   185   190
Phe Asn Ala Gly Lys Ile Ala Lys Gln Leu Leu Asn Ile Cys Glu Gly
            195   200   205
Phe Ser Pro Leu Ile Ala Asn Glu Ile Val Asn Arg Arg Gln Phe Met
            210   215   220
Thr Gln Glu Thr Leu Pro Asp Ala Phe Asp Glu Val Met Ala Glu Thr
225   230   235   240
Lys Ser Ala Pro Thr Pro Val Phe His Lys Asn His Glu Thr Gly Lys
                245   250   255
Glu Asp Phe Tyr Phe Met Lys Leu Asn Gln Phe Tyr Asp Asp Ile Val
                260   265   270
Glu Tyr His Ser Leu His Glu Leu Leu Asp Arg Phe Tyr Asp Ala Arg
            275   280   285
Gly Glu Arg Glu Arg Val Lys Gln Arg Ala Asn Asp Leu Val Arg Phe
            290   295   300
Val Gln Gln Gln Leu Gln Lys Gln Gln Asn Lys Leu Ser Lys Leu Ile
305   310   315   320
Asp Glu Tyr Glu Ser Ala Lys Asn Lys Glu Thr Gln Gln Leu Tyr Gly
                325   330   335
Glu Leu Ile Thr Ala Asn Ile Tyr Arg Ile Gln Gln Gly Asp Asp Ser
            340   345   350
Val Ile Ala Leu Asn Tyr Tyr Thr Gly Glu Glu Val Lys Ile Pro Leu
            355   360   365
Asn Pro Thr Lys Ser Pro Ser Thr Asn Ala Gln Tyr Tyr Tyr Lys Gln

```
         370                        375                        380
Tyr Asn Arg Met Lys Thr Arg Glu His Glu Leu Thr His Gln Ile Lys
385                        390                        395                        400
Leu Thr Lys Glu Asn Ile Asp Tyr Phe Asp Asn Ile Glu Gln Gln Leu
                        405                        410                        415
Lys His Ile Thr Val Asp Asp Ile Asp Asp Ile Arg Asp Glu Leu Ala
                        420                        425                        430
Glu Gln Gly Phe Met Lys Gln Arg Lys Gln Ser Lys Lys Lys Lys Gln
                435                        440                        445
Ser Lys Ile Gln Leu Gln Thr Tyr His Ser Thr Asp Gly Asp Thr Ile
                450                        455                        460
Leu Val Gly Lys Asn Asn Lys Gln Asn Asp Tyr Leu Thr Asn Lys Lys
465                        470                        475                        480
Ala Arg Lys Asn His Leu Trp Phe His Thr Lys Asp Ile Pro Gly Ser
                        485                        490                        495
His Val Val Ile Leu Asn Glu Ser Pro Ser Glu Thr Thr Ile Lys Glu
                500                        505                        510
Ala Ala Met Leu Ala Gly Tyr Phe Ser Lys Ala Gly Ser Ser Ala Gln
                515                        520                        525
Ile Pro Val Asp Tyr Thr Glu Ile Arg His Val His Lys Pro Ser Gly
                530                        535                        540
Ala Lys Pro Gly Phe Val Thr Tyr Asp Asn Gln Lys Thr Leu Phe Ala
545                        550                        555                        560
Thr Pro Asp Tyr Asp His Ile Gln Gln Met Lys Glu Ser
                        565                        570
```

<210> 5626
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5626
```
Leu Ser Thr Ser Ile Leu Lys Pro Leu Ala Ala Ile Ile Pro Asn Asn
1                        5                        10                        15
Lys Ile Glu Thr Pro Pro Ile Thr Gly Val Gly Ile Glu Asp Ile Lys
                20                        25                        30
Ala Val Asn Leu Pro Ile Asn Ala Arg Met Ile Ala Ile Thr Ala Ala
                35                        40                        45
Pro Pro Ile Thr
                50
```

<210> 5627
<211> 170
<212> PRT
<213> S.epidermidis

<400> 5627
```
Gln Ser Lys Ser Phe Glu Arg Val Tyr Lys Val Lys Val Ala Val Ile
1                        5                        10                        15
Met Gly Ser Ser Ser Asp Trp Lys Ile Met Lys Glu Ser Cys Ser Met
                20                        25                        30
Leu Glu Glu Phe Glu Ile Pro Tyr Glu Lys Lys Val Val Ser Ala His
                35                        40                        45
Arg Thr Pro Gln Met Met Phe Asn Phe Ala Ser Gln Ala Arg Gln Asn
                50                        55                        60
Gly Phe Asp Ile Ile Ile Ala Gly Ala Gly Gly Ala Ala His Leu Pro
```

```
65                        70                        75                        80
Gly Met Val Ala Ser Met Thr Thr Leu Pro Val Ile Gly Val Pro Ile
                     85                        90                        95
Glu Ser Lys Ser Leu Lys Gly Leu Asp Ser Leu Leu Ser Ile Val Gln
                 100                       105                       110
Met Pro Gly Gly Ile Pro Val Ala Thr Thr Ala Ile Gly Lys Ser Gly
             115                       120                       125
Ala Lys Asn Ala Gly Ile Leu Ala Ala Arg Met Leu Gly Ile Thr Asn
         130                       135                       140
Glu Ser Val Gln Asn Asn Leu Glu Asn Tyr Glu Lys Ser Leu Val Ala
145                       150                       155                       160
Lys Val Glu Glu Met Gln Asn Glu Leu Gln
                     165                       170
```

<210> 5628
<211> 53
<212> PRT
<213> S.epidermidis

<400> 5628

```
Phe Asn Met Arg Lys Val Gln Cys Ile Ile Cys Asp Thr Lys Val Phe
1                   5                         10                        15
Ile Asp Glu His Thr Val Glu Ala Lys Arg Leu Lys Asn Asn Pro Ile
             20                        25                        30
Arg Thr Phe Met Cys Asp Asp Cys Lys Ser Arg Leu Asp Thr Pro Lys
         35                        40                        45
Gln Ser Lys Arg Asp
     50
```

<210> 5629
<211> 204
<212> PRT
<213> S.epidermidis

<400> 5629

```
Glu Asn Arg Ser Glu Pro Pro Leu Ala Leu Lys Asp Leu Phe Asn Asn
1                   5                         10                        15
Phe Phe Val Val Glu Glu Glu Glu Val Glu Gly Pro Glu Glu Arg
             20                        25                        30
Glu Ser Ser Arg Ser Arg Glu Arg Val Gln Glu Arg Glu Asp Tyr Asn
         35                        40                        45
Arg Asn Glu Asn Gln Ala Thr Pro Gln Thr Phe Asn Asn Lys Gln Gln
     50                        55                        60
Ala Ile Lys Ser Val Pro Gln Lys Asn Thr Leu Arg Ser Asn Thr Thr
65                        70                        75                        80
Ser Glu Glu Arg Asn Tyr Arg Met Asn Asn Asn Ser Lys Asn Asn Ser
                     85                        90                        95
Arg Asn Val Val Thr Met Asn Gln Ala Ser Gln Ser Tyr Ala Ala Gln
                 100                       105                       110
Glu Ser Ser Lys Met Cys Leu Phe Glu Pro Arg Val Phe Ser Asp Thr
             115                       120                       125
Gln Asp Ile Ala Asp Glu Leu Lys Asn Arg Arg Ala Thr Leu Val Asn
         130                       135                       140
Leu Gln Arg Ile Asp Gln Val Ser Ala Lys Arg Ile Ile Asp Phe Leu
145                       150                       155                       160
Ser Gly Thr Val Tyr Ala Ile Gly Gly Asp Ile Gln Arg Val Gly Thr
```

```
                165                     170                     175
Asp Ile Phe Leu Cys Thr Pro Asp Asn Val Glu Val Ala Gly Ser Ile
            180                 185                 190
Thr Asp His Ile Glu Asn Met Glu Gln His Tyr Glu
            195                 200
```

<210> 5630
<211> 471
<212> PRT
<213> S.epidermidis

<400> 5630
```
Phe Val Arg Arg Cys Leu Ser Met Glu Glu His Tyr Tyr Val Ser Ile
1               5                   10                  15
Asp Ile Gly Ser Ser Ser Val Lys Thr Ile Val Gly Glu Lys Phe His
            20                  25                  30
Asn Gly Ile Asn Val Ile Gly Thr Gly Gln Thr Tyr Thr Ser Gly Ile
            35                  40                  45
Lys Asn Gly Leu Ile Asp Asp Phe Asp Ile Ala Arg Gln Ala Ile Lys
        50                  55                  60
Asp Thr Ile Lys Lys Ala Ser Ile Ala Ser Gly Val Asp Ile Lys Asp
65                  70                  75                      80
Val Phe Leu Lys Leu Pro Ile Ile Gly Thr Glu Val Tyr Asp Glu Ser
                85                  90                  95
Asn Glu Ile Glu Phe Tyr Glu Asp Thr Glu Ile Asp Gly Thr His Ile
            100                 105                 110
Glu Ser Val Leu Glu Gly Ile Arg Asp Lys Asn Asp Val Pro Glu Thr
            115                 120                 125
Glu Val Ile Asn Val Phe Pro Ile Arg Phe Val Val Asp Lys Asp Asn
        130                 135                 140
Glu Val Ser Asp Pro Lys Glu Leu Ile Ala Arg His Ser Leu Lys Val
145                 150                 155                 160
Asp Ala Gly Val Ile Ala Ile Gln Lys Ser Ile Leu Ile Asn Met Ile
                165                 170                 175
Lys Cys Val Glu Ala Cys Gly Val Asp Val Leu Asp Val Tyr Ser Asp
            180                 185                 190
Ala Tyr Asn Tyr Gly Ser Ile Leu Thr Pro Thr Glu Lys Glu Leu Gly
            195                 200                 205
Ala Cys Val Ile Asp Ile Gly Glu Asp Leu Thr Gln Val Ala Phe Tyr
        210                 215                 220
Glu Arg Gly Glu Leu Val Asp Ala Glu Ser Ile Glu Met Ala Gly Arg
225                 230                 235                 240
Asp Ile Thr Asp Asp Ile Ala Gln Gly Leu Asn Thr Thr Tyr Asp Thr
            245                 250                 255
Ala Glu Lys Val Lys His Gln Tyr Gly His Ala Phe Tyr Asp Ser Ala
            260                 265                 270
Ser Asp Gln Asp Val Phe Ser Val Asp Gln Val Asp Ser Asp Glu His
            275                 280                 285
Val Gln Tyr Thr Gln Lys Asp Leu Ser Asp Phe Ile Glu Gln Arg Val
        290                 295                 300
Glu Asp Ile Phe Phe Glu Val Phe Asp Val Leu Gln Glu Leu Gly Leu
305                 310                 315                 320
Thr Lys Val Asn Gly Gly Phe Val Val Thr Gly Gly Ser Ala Asn Leu
            325                 330                 335
Leu Gly Val Lys Glu Leu Leu Gln Asp Met Val Ser Glu Lys Val Arg
            340                 345                 350
```

```
Ile His Thr Pro Ser Gln Met Gly Ile Arg Lys Pro Glu Phe Ser Ser
        355                 360                 365
Ala Ile Ser Thr Ile Ser Ser Ser Ile Ala Phe Asp Glu Leu Leu Asp
        370                 375                 380
Tyr Val Thr Ile Ser Tyr Gln Asp Asn Glu Glu Phe Glu Glu Glu Val
385                 390                 395                     400
Ile Glu Thr Asp Lys Asp Thr Glu Thr Lys Ser Ser Gly Phe Asp Trp
                405                 410                 415
Phe Lys Arg Lys Ser Asn Lys Lys Glu Asn Asp Glu Val Ala Pro Glu
            420                 425                 430
Ala Pro Arg Glu Glu Ser Tyr Glu Asp Arg Glu Asn His Leu Glu Asp
            435                 440                 445
Glu Gln Gln Thr Glu Gly Lys Ala Lys Glu Glu Ser Lys Phe Lys Lys
        450                 455                 460
Leu Met Lys Ser Leu Phe Glu
465                 470
```

```
<210> 5631
<211> 111
<212> PRT
<213> S.epidermidis

<400> 5631
Lys Leu Arg Arg Ile Gly Ile Met Ala Ile Val Lys Val Thr Asp Ser
1               5                   10                  15
Asp Phe Asp Ser Lys Ile Glu Ser Gly Val Lys Leu Val Asp Phe Trp
            20                  25                  30
Ala Thr Trp Cys Gly Pro Cys Lys Met Ile Ala Pro Val Leu Glu Glu
            35                  40                  45
Leu Ala Gly Asp Tyr Asp Gly Lys Ala Asp Ile Leu Lys Leu Asp Val
        50                  55                  60
Asp Glu Asn Pro Ser Thr Ala Ala Lys Tyr Glu Val Met Ser Ile Pro
65                  70                  75                  80
Thr Leu Ile Val Phe Lys Asp Gly Glu Pro Val Asp Lys Val Val Gly
                85                  90                  95
Phe Gln Leu Lys Glu Asn Leu Ala Glu Val Leu Asp Lys His Leu
            100                 105                 110
```

```
<210> 5632
<211> 74
<212> PRT
<213> S.epidermidis

<400> 5632
Met Val Arg Arg Arg Leu Met Glu Gln Asn Asn Asp Asn Asn His Leu
1               5                   10                  15
Tyr Thr Leu Ile Lys His Cys Asn Glu Phe Leu Tyr Arg Arg Asp Asp
            20                  25                  30
Tyr Arg Ile Pro Ser Asp Ser Gln Ser Asp His Ser Asn Asn Glu Asn
            35                  40                  45
Ile Leu Lys Thr Met Asn Asp Glu Val Phe Lys His Ser Ile Glu Ile
        50                  55                  60
Phe Lys Arg Ala Lys Lys Asn Leu Asn His
65                  70
```

```
<210> 5633
```

<211> 49
<212> PRT
<213> S.epidermidis

<400> 5633
Ile Asn Ala Gly Leu Leu Cys Lys Thr Leu Gly His Phe Ala Tyr Lys
1   5   10   15
Phe Leu Arg Ile Ser Asn Leu Asn Tyr Met Phe Arg Arg Gly Asp Ser
            20   25   30
Phe Trp Leu Asn Gln Arg Met Asn Phe Thr Leu Glu Asp Tyr Ile Arg
            35   40   45
Tyr

<210> 5634
<211> 54
<212> PRT
<213> S.epidermidis

<220>
<221> UNSURE
<222> (3)
<223> Identity of amino acid sequences at the above locations are unknown.

<400> 5634
Ile Met Xaa Phe Leu Asn Lys Ser Leu Phe Gln Asn Ile Ser Pro Pro
1   5   10   15
Asn Asn Ile Tyr Thr Phe His Tyr Thr Leu Asn Phe Lys Leu Lys Ser
            20   25   30
Ser Lys Asn Asn Leu Asn Ile Lys Cys Pro Ile Met Lys Gln Leu Tyr
            35   40   45
Ile Ile Leu Lys Phe Ile
    50

<210> 5635
<211> 51
<212> PRT
<213> S.epidermidis

<400> 5635
Tyr Leu Asp Gly Leu Phe Ile Leu Lys Tyr Ile Glu Thr Arg His Leu
1   5   10   15
Ser Tyr Arg Tyr Gly Ile Leu Ser Gly Val Phe Leu Phe Asn Cys Tyr
            20   25   30
Lys Phe Ile Glu Lys Tyr Ile Ile Leu Asp Phe Ser Ser Phe Leu Thr
            35   40   45
Leu Val Lys
    50

<210> 5636
<211> 384
<212> PRT
<213> S.epidermidis

<400> 5636
Arg Met Leu Gly Glu Gln Tyr Thr Gln Ile Lys Arg Pro Ala Asn Arg

```
1                   5                   10                  15
Leu Thr Glu Lys Ile Leu Gly Trp Phe Ser Trp Val Phe Leu Leu Ile
            20                  25                  30
Leu Thr Ile Val Ser Met Phe Ile Ala Leu Val Ser Phe Ser Asn Asp
            35                  40                  45
Thr Ser Ile Ala Asn Leu Glu Asn Thr Leu Asn Asn Asn Glu Leu Val
    50                  55                  60
Gln Gln Ile Leu Ala Asn Asn Asp Leu Ser Thr Thr Gln Phe Val Ile
65                  70                  75                  80
Trp Leu Gln Asn Gly Val Trp Ala Ile Ile Val Tyr Phe Ile Val Cys
            85                  90                  95
Leu Leu Ile Ser Phe Leu Ala Leu Ile Ser Met Asn Ile Arg Ile Leu
            100                 105                 110
Ser Gly Phe Leu Phe Leu Ile Ala Ala Ile Val Thr Ile Pro Leu Val
            115                 120                 125
Leu Leu Ile Val Thr Leu Ile Ile Pro Ile Leu Phe Phe Ile Ile Ala
            130                 135                 140
Met Met Met Phe Ala Arg Arg Asp Arg Ile Glu Thr Val Pro Ser Tyr
145                 150                 155                 160
Tyr Asn Glu Tyr Asp Gln Pro Tyr Tyr Asp Glu Arg Gly Phe Tyr Glu
            165                 170                 175
Pro Glu Ser Arg Asn Glu His Gly Tyr Asn Asp Asp Val Tyr Glu Pro
            180                 185                 190
Met His Thr Lys Lys Glu Asp Arg Asn Thr Arg Arg Gln Phe Asn Arg
            195                 200                 205
Asn Ala Gln Gln Gln Asp Ser Tyr Asn Gly Ile Thr Asp Asn Gln Pro
    210                 215                 220
Asp Glu Asp Thr Ser Ser Asp Gln Leu Tyr Ser Asp Glu Tyr Val Asp
225                 230                 235                 240
Asn Glu Asp Lys Tyr Ser Gln Phe Pro Lys Arg Ala Val Glu Ser Glu
            245                 250                 255
Tyr Ala Ser Gln Gln Thr Glu Asp Glu Pro Thr Val Met Ser Arg Gln
            260                 265                 270
Ala Lys Tyr Asn Lys Lys Ser Lys Asn Thr Asp Phe Glu Asp Ala Gln
            275                 280                 285
Gln Glu His Met Glu Gly Asn Gln Phe Asp Asp Val Gly Val Val Glu
            290                 295                 300
Pro Gln Ile Asp Pro Lys Glu Leu Lys Ala Gln Arg Lys Arg Glu Lys
305                 310                 315                 320
Ala Glu Ile Arg Ala Lys Lys Lys Glu Lys Arg Lys Ala Tyr Asn Lys
            325                 330                 335
Arg Met Lys Glu Arg Arg Lys Asn Gln Pro Ser Ala Val Asn Gln Arg
            340                 345                 350
Arg Met Asn Tyr Glu Glu Arg Arg Gln Met Ile Asn Asn Glu Gln Glu
            355                 360                 365
Asp Thr Asp Asn Asn Leu Asn Gln Gln Glu Asp Ser Lys Lys Glu Asn
    370                 375                 380
```

<210> 5637
<211> 668
<212> PRT
<213> S.epidermidis

<400> 5637
```
Ser Met Ile Gly Lys Val Ile Asn Glu Arg Tyr Thr Ile Thr Asp Lys
1                   5                   10                  15
```

Leu Gly Gly Gly Gly Met Ser Ile Val Tyr Leu Ala Val Asp Ser Ile
    20   25   30

Leu Asn Arg Lys Val Ala Ile Lys Ala Ile Ser Ile Pro Pro Ser Glu
    35   40   45

Lys Glu Glu Thr Phe Lys Arg Phe Glu Arg Glu Val His Asn Ser Ser
    50   55   60

Gln Leu Ser His Glu Asn Ile Val Ser Met Ile Asp Val Asp Glu Glu
65   70   75   80

Asp Asp Cys Phe Tyr Ile Val Met Glu Tyr Ile Glu Gly Pro Thr Leu
            85   90   95

Ala Glu Tyr Ile His Ser His Gly Pro Leu Ser Val Glu Thr Ala Ile
            100   105   110

Gln Phe Thr Glu Gln Ile Leu Ser Gly Ile Lys His Ala His Asp Met
            115   120   125

Arg Ile Val His Arg Asp Ile Lys Pro Gln Asn Ile Leu Ile Asp Lys
    130   135   140

Asn Lys Lys Leu Gln Ile Phe Asp Phe Gly Ile Ala Lys Ala Leu Ser
145   150   155   160

Glu Thr Ser Leu Thr Gln Thr Asn His Val Leu Gly Thr Val Gln Tyr
            165   170   175

Leu Ser Pro Glu Gln Ala Lys Gly Glu Ala Thr Asp Glu Ser Thr Asp
            180   185   190

Ile Tyr Ser Ile Gly Ile Val Leu Tyr Glu Met Leu Val Gly Glu Pro
            195   200   205

Pro Phe Asn Gly Glu Thr Ala Val Ser Ile Ala Ile Lys His Ile Gln
    210   215   220

Asp Ser Ile Pro Asn Ile Thr Thr Asp Lys Arg Asp Asp Val Pro Gln
225   230   235   240

Ser Leu Ser Asn Val Val Leu Arg Ala Thr Glu Lys Asp Lys Tyr His
            245   250   255

Arg Tyr His Thr Val Gln Glu Met Cys Asp Asp Leu Thr Ser Ala Leu
            260   265   270

His Glu Asn Arg Leu Asn Glu Glu Lys Tyr Glu Leu Asp Lys Thr Lys
            275   280   285

Thr Val Pro Leu Thr Lys Asp Asp Leu Asn His Lys Ile Tyr Asp Glu
            290   295   300

Gln Asn Gln Asn Asp Leu Asn Lys Thr Met Gln Ile Pro Ile Val Asn
305   310   315   320

Asp Ser Ile Lys Gln Gln Glu Phe Gln Ser Ser Glu Pro Arg Tyr Tyr
            325   330   335

Gln Lys Ser Asp Lys Lys Arg Ser Lys Met Lys Ile Ala Ile Leu Ser
            340   345   350

Ile Ile Phe Val Ile Leu Leu Ile Gly Leu Phe Ser Phe Val Ala Met
            355   360   365

Ala Val Phe Gly Asn Lys Tyr Glu Glu Met Pro Asp Leu Lys Gly Lys
            370   375   380

Thr Glu Lys Gln Ala Glu Lys Val Leu Asp Ser His His Leu Lys Val
385   390   395   400

Gly Asp Ile Ser Arg Asn Tyr Ser Asp Lys Tyr Pro Glu Asn Gln Ile
            405   410   415

Ile Lys Thr Asn Pro Asp Ser Gly Glu Arg Val Glu Gln Gly Asn Arg
            420   425   430

Val Asp Ile Val Leu Ser Lys Gly Pro Glu Lys Val Lys Met Pro Asn
            435   440   445

Val Leu Gly Met Ser Lys Asn Asp Ala Leu Lys Lys Leu Lys Ala Ile
            450   455   460

```
Gly Phe Lys Asp Ile His Val Glu Gln Ala Tyr Ser Gln Thr Tyr Glu
465                 470             475                 480
Lys Gly Leu Ile Ser Glu Gln Ser Val Val Ala Asn Ser Glu Val Ala
                485             490                 495
Val Asn Asn His His Ile Thr Ile Tyr Glu Ser Leu Gly Val Arg Gln
            500             505             510
Val Tyr Val Asn Asn Tyr Glu Asn Lys Ser Tyr Glu Ser Ala Lys Lys
        515             520             525
Glu Leu Glu Asp Lys Gly Phe Lys Val Gln Val Thr Lys Glu Asn Asn
    530             535             540
Asp Asp Val Glu Lys Gly Asn Val Ile Ser Gln Ser Pro Lys Asp Lys
545             550             555             560
Thr Val Asp Glu Gly Ser Thr Ile Leu Leu Val Val Ser Lys Gly Glu
            565             570             575
Lys Ser Glu Glu Asp Asp Asp Glu Glu Asp Lys Asp Thr Thr Thr Lys
        580             585             590
Asn Glu Thr Val Lys Val Pro Tyr Thr Gly Lys Lys Ser Lys Ser Gln
        595             600             605
Lys Val Glu Val Phe Ile Arg Asp Ile Glu Asn Lys Gly Asp Ser Ala
    610             615             620
Val Gln Thr Phe Asn Ile Lys Ser Asp Lys Thr Ile Asn Ile Pro Leu
625             630             635             640
Lys Ile Lys Lys Gly Ser Asp Ala Gly Tyr Thr Ile Arg Val Asp Asn
            645             650             655
Lys Ile Val Ala Asp Lys Asp Val Ser Tyr Asp Gly
            660             665
```

<210> 5638
<211> 53
<212> PRT
<213> S.epidermidis

<400> 5638
```
Lys Trp Ile Gly Cys Gln Gln Lys Thr Thr Lys Lys Ser Ala Thr Ala
1               5               10              15
Ala Lys Leu Asn Asp Pro Ser Ile Ala Thr Gln Pro Ile Asn Gly Gly
        20              25              30
Thr Ala Pro Gly Lys Leu Pro Thr Thr Val Phe Gln Val Val Trp Arg
        35              40              45
Leu Asp Gln Ile Glu
    50
```

<210> 5639
<211> 95
<212> PRT
<213> S.epidermidis

<400> 5639
```
Leu Tyr Lys Gly Glu Phe Asn Met Glu Gln Lys Ser Tyr Val Ile Thr
1               5               10              15
Asp Glu Thr Gly Ile His Ala Arg Pro Ala Thr Met Leu Val Gln Thr
            20              25              30
Ala Ser Lys Phe Asp Ser Asp Ile Gln Leu Glu Tyr Asn Gly Lys Lys
        35              40              45
Val Asn Leu Lys Ser Ile Met Gly Val Met Ser Leu Gly Val Gly Lys
    50              55              60
```

Asp Ala Glu Ile Thr Ile Tyr Ala Asp Gly Ser Asp Glu Thr Asp Ala
65   70   75   80
Ile Gln Ser Ile Thr Asp Val Leu Ser Lys Glu Gly Leu Ala Glu
                85   90   95

<210> 5640
<211> 415
<212> PRT
<213> S.epidermidis

<400> 5640
Gly Tyr Glu Gly Gly Thr Ser Met Ser Phe Phe Lys Arg Leu Lys Asp
1   5   10   15
Lys Phe Ser Ser Lys Ser Glu Asp Ile Gln Lys Asp Leu Asp Glu
                20   25   30
Thr Val Asp Ser Asn Ala Asn Ser Asp Ser Asp Ser Met Asp Pro Asn
                35   40   45
Asp Ser Asp Glu Gln Val Lys Pro Lys Lys Lys Pro Lys Lys Leu Ser
        50   55   60
Glu Ala Asp Phe Asp Glu Asp Gly Leu Ile Ser Ile Glu Asp Phe Glu
65   70   75   80
Glu Ile Glu Ala Gln Lys Ile Gly Ala Lys Phe Lys Ala Gly Leu Glu
                85   90   95
Lys Ser Arg Gln Asn Phe Gln Glu Gln Leu Asn Asn Leu Ile Ala Arg
                100   105   110
Tyr Arg Lys Val Asp Glu Asp Phe Phe Glu Ala Leu Glu Glu Met Leu
        115   120   125
Ile Thr Ala Asp Val Gly Phe Asn Thr Val Met Lys Leu Thr Asp Glu
        130   135   140
Leu Arg Thr Glu Ala Gln Arg Arg Asn Ile Gln Glu Thr Glu Asp Leu
145   150   155   160
Arg Glu Val Ile Val Glu Lys Ile Val Glu Ile Tyr His Gln Glu Asp
                165   170   175
Asp Tyr Ser Glu Ala Met Asn Ile Glu Asp Gly Arg Leu Asn Val Ile
                180   185   190
Leu Met Val Gly Val Asn Gly Val Gly Lys Thr Thr Thr Ile Gly Lys
        195   200   205
Leu Ala Tyr Arg Tyr Gln Gln Glu Gly Lys Lys Val Met Leu Ala Ala
        210   215   220
Gly Asp Thr Phe Arg Ala Gly Ala Ile Gln Gln Leu Asn Val Trp Gly
225   230   235   240
Glu Arg Val Gly Val Glu Val Val Ser Gln Asn Glu Gly Ser Asp Pro
                245   250   255
Ala Ala Val Val Tyr Asp Ala Ile Asn Ala Ala Lys Asn Lys Gly Val
                260   265   270
Asp Ile Leu Ile Cys Asp Thr Ala Gly Arg Leu Gln Asn Lys Ser Asn
        275   280   285
Leu Met Gln Glu Leu Asp Lys Met Lys Arg Val Ile Asn Arg Ala Ile
        290   295   300
Pro Asp Ala Pro His Glu Ala Leu Leu Cys Leu Asp Ala Thr Thr Gly
305   310   315   320
Gln Asn Ala Leu Ser Gln Ala Arg Ser Phe Lys Glu Val Thr Asn Val
                325   330   335
Ser Gly Ile Val Leu Thr Lys Leu Asp Gly Thr Ala Lys Gly Gly Ile
                340   345   350
Val Leu Ala Ile Arg Asn Glu Leu His Ile Pro Val Lys Tyr Val Gly

```
            355                      360                      365
Leu Gly Glu Lys Met Asp Asp Leu Gln Pro Phe Asn Pro Glu Ser Tyr
        370                  375                  380
Val Tyr Gly Leu Phe Ala Asp Met Ile Glu Gln Asn Glu Asp Ile Pro
385                  390                  395                  400
Glu Glu Ile Ser Arg Asn Ser Ser Val Glu Ser Glu Glu Gly Asn
                405                  410                  415
```

<210> 5641
<211> 382
<212> PRT
<213> S.epidermidis

<400> 5641

```
Arg Ser Glu Gly Phe Asn Arg Cys His Ser Phe Ile Phe Ile Gly Gly
1               5                   10                  15
Asn Cys Met Asn Pro Leu Leu Ser Phe Lys Asp Val Ser Lys Gly Phe
                20                  25                  30
Glu Asp Val Gln Ile Leu Asn Glu Ile Asn Ile Asp Ile Glu Pro Gly
            35                  40                  45
Tyr Phe Tyr Thr Leu Leu Gly Pro Ser Gly Cys Gly Lys Thr Thr Ile
        50                  55                  60
Leu Lys Leu Ile Ala Gly Phe Glu Tyr Pro Asp Ser Gly Asp Ile Ile
65                  70                  75                  80
Tyr Lys Asp Lys Pro Ile Gly Lys Met Pro Pro Asn Lys Arg Lys Val
                85                  90                  95
Asn Thr Val Phe Gln Asp Tyr Ala Leu Phe Pro His Leu Asn Val Phe
                100                 105                 110
Asp Asn Ile Ala Tyr Gly Leu Lys Leu Lys Lys Leu Ser Lys Ser Glu
                115                 120                 125
Ile Lys Arg Lys Val Thr Glu Ala Leu Gln Leu Val Lys Leu Ser Gly
            130                 135                 140
Tyr Glu His Arg Gln Ile Gln Gly Met Ser Gly Gly Gln Lys Gln Arg
145                 150                 155                 160
Val Ala Ile Ala Arg Ala Ile Val Asn Glu Pro Glu Ile Leu Leu Leu
                165                 170                 175
Asp Glu Ser Leu Ser Ala Leu Asp Leu Lys Leu Arg Thr Glu Met Gln
            180                 185                 190
Tyr Leu Leu Arg Glu Leu Gln Ser Arg Leu Gly Ile Thr Phe Ile Phe
        195                 200                 205
Val Thr His Asp Gln Glu Glu Ala Leu Ala Leu Ser Asp Tyr Ile Phe
        210                 215                 220
Val Met Lys Asp Gly Lys Ile Gln Gln Phe Gly Thr Pro Ile Asp Ile
225                 230                 235                 240
Tyr Asp Glu Pro Val Asn Arg Phe Val Ala Asp Phe Ile Gly Glu Ser
                245                 250                 255
Asn Ile Val His Gly Thr Met Val Glu Asp Phe Val Val Asn Ile Tyr
                260                 265                 270
Gly Gln Asn Phe Asp Cys Val Asp Met Gly Ile Lys Glu Asn Lys Lys
            275                 280                 285
Val Glu Val Val Ile Arg Pro Glu Asp Ile Ser Leu Val Ser Gln Asn
        290                 295                 300
Asp Gly Leu Phe Lys Ala Lys Val Asp Ser Met Leu Phe Arg Gly Val
305                 310                 315                 320
His Tyr Glu Ile Cys Cys Lys Asp Arg Lys Gly Tyr Glu Trp Val Ile
                325                 330                 335
```

```
Gln Ser Thr Lys Lys Ala Asn Val Gly Ser Glu Val Gly Leu Tyr Phe
        340                 345                 350
Glu Pro Glu Ala Ile His Ile Met Val Pro Gly Glu Thr Glu Glu Glu
        355                 360                 365
Phe Asp Lys Arg Ile Glu Ser Tyr Glu Asp Tyr His His Ala
    370                 375                 380
```

<210> 5642
<211> 202
<212> PRT
<213> S.epidermidis

<400> 5642
```
Phe Ile Glu Gly Glu Asn Asp Met Glu Asp Ile Val Ile Ala Thr Asn
1               5                   10                  15
Asn Gln Gly Lys Ile Asn Asp Phe Lys Ala Ile Phe Lys Asn Gln His
            20                  25                  30
Val Ile Gly Ile Ser Glu Leu Ile Glu Asp Phe Asp Val Glu Glu Thr
        35                  40                  45
Gly Ala Thr Phe Glu Glu Asn Ala Arg Leu Lys Ser Glu Ala Ala Ala
    50                  55                  60
His Ala Leu Asn Lys Arg Val Ile Ala Asp Asp Ser Gly Leu Glu Val
65                  70                  75                  80
Phe Ala Leu Asn Gly Glu Pro Gly Val Tyr Ser Ala Arg Tyr Ala Gly
            85                  90                  95
Leu Gly Lys Asn Asp Glu Asp Asn Ile Glu Lys Leu Leu Thr Asn Leu
            100                 105                 110
Glu Asp Val Gln Asp Arg Arg Ala Gln Phe Val Cys Val Ile Ser Met
        115                 120                 125
Ser Ala Pro Asn Glu Lys Thr Lys Thr Phe Lys Gly Thr Val Ser Gly
    130                 135                 140
Val Ile Thr Thr Glu Arg His Gly Lys Asn Gly Phe Gly Tyr Asp Pro
145                 150                 155                 160
Ile Phe Phe Val Pro Glu Leu Asn Lys Thr Met Ala Glu Ile Thr Asn
            165                 170                 175
Asp Glu Lys Gly Lys Ile Ser His Arg Gly Asn Ala Ile Arg Leu Leu
            180                 185                 190
Lys Glu Tyr Leu Glu Gly Glu Gln His Val
        195                 200
```

<210> 5643
<211> 735
<212> PRT
<213> S.epidermidis

<400> 5643
```
Lys Val Gly Gly Asn Lys Met Ser Lys Phe Ile Glu Pro Ser Asn Glu
1               5                   10                  15
Glu Ile Lys Leu Glu Lys Leu Tyr Gln Asp Ile Gly Leu Ser Asp Lys
            20                  25                  30
Glu Tyr Asp Lys Val Val Glu Ile Leu Gly Arg Glu Pro Asn Phe Thr
        35                  40                  45
Glu Val Gly Ile Phe Ser Val Met Trp Ser Glu His Cys Ser Tyr Lys
        50                  55                  60
His Ser Lys Pro Phe Leu Lys Gln Phe Pro Thr Thr Gly Glu His Val
65                  70                  75                  80
```

Leu Met Gly Pro Gly Glu Gly Ala Gly Val Val Asp Ile Gly Asp Asn
              85   90   95
Gln Ala Val Val Phe Lys Val Glu Ser His Asn His Pro Ser Ala Ile
              100   105   110
Glu Pro Tyr Gln Gly Ala Ala Thr Gly Val Gly Gly Ile Ile Arg Asp
          115   120   125
Ile Val Ser Ile Gly Ala Arg Pro Ile Asn Leu Leu Asn Ser Leu Arg
      130   135   140
Phe Gly Glu Leu Thr Val Lys Gln Asn Gln Arg Leu Leu Lys Gly Val
145   150   155   160
Val Ser Gly Ile Gly Gly Tyr Gly Asn Cys Ile Gly Ile Pro Thr Thr
              165   170   175
Ala Gly Glu Ile Glu Phe Asp Glu Arg Tyr Asp Gly Asn Pro Leu Val
              180   185   190
Asn Ala Met Cys Val Gly Ile Ile Asp His Asp Met Val Gln Lys Gly
          195   200   205
Thr Ala Lys Gly Val Gly Asn Ser Val Ile Tyr Val Gly Leu Lys Thr
      210   215   220
Gly Arg Asp Gly Ile His Gly Ala Thr Phe Ala Ser Glu Glu Leu Thr
225   230   235   240
Glu Glu Ser Glu Ser Lys Arg Pro Ser Val Gln Ile Gly Asp Pro Phe
              245   250   255
Val Gly Lys Lys Leu Met Glu Ala Thr Leu Glu Ala Ile Thr Phe Asp
              260   265   270
Glu Leu Val Gly Ile Gln Asp Met Gly Ala Ala Gly Leu Thr Ser Ser
          275   280   285
Ser Ser Glu Met Ala Ala Lys Gly Gly Ser Gly Leu His Leu Arg Leu
      290   295   300
Asp Gln Val Pro Thr Arg Glu Pro Gly Ile Ser Pro Tyr Glu Met Met
305   310   315   320
Phe Ser Glu Thr Gln Glu Ser Met Leu Leu Val Val Glu Lys Gly Thr
              325   330   335
Glu Gln Lys Phe Leu Asp Leu Phe Asn Lys His Glu Leu Asp Ser Ala
          340   345   350
Val Ile Gly Glu Val Thr Asp Thr Asp Arg Phe Val Leu Thr Tyr Asp
      355   360   365
Asp Glu Val Tyr Ala Asp Ile Pro Val Gln Pro Leu Ala Asp Glu Ala
      370   375   380
Pro Val Tyr Ile Leu Glu Gly Glu Glu Lys Glu Tyr Asn Thr Ser Lys
385   390   395   400
Asn Asp Tyr Ser Asn Ile Asp Val His Asp Thr Phe Ile Lys Leu Leu
              405   410   415
Gln His Pro Thr Ile Ala Ser Lys His His Leu Tyr Glu Gln Tyr Asp
          420   425   430
Gln Gln Val Gly Ala Asn Thr Ile Ile Lys Pro Gly Leu Gln Ala Ser
          435   440   445
Val Val Arg Val Glu Gly Thr Gln Lys Ala Ile Ala Ser Thr Ile Asp
      450   455   460
Gly Glu Ala Arg Tyr Val Phe Asn Gln Pro Tyr Glu Gly Gly Lys Met
465   470   475   480
Val Val Ala Glu Ala Tyr Arg Asn Leu Ile Ala Val Gly Ala Thr Pro
              485   490   495
Leu Ala Met Thr Asp Cys Leu Asn Tyr Gly Ser Pro Glu Lys Lys Glu
          500   505   510
Ile Tyr Gln Gln Leu Ile Asp Ser Thr Lys Gly Met Ser Glu Ala Cys
      515   520   525

```
Lys Val Leu Gln Thr Pro Val Val Ser Gly Asn Val Ser Leu Tyr Asn
    530                 535                 540
Glu Thr Arg Gly Thr Ser Ile Phe Pro Thr Pro Val Val Gly Met Val
545                 550                 555                 560
Gly Leu Ile Glu Asp Val Ser Tyr Leu Lys Glu Phe Lys Pro Lys Ala
                565                 570                 575
Gly Asp Lys Ile Tyr Leu Val Gly Glu Thr Arg Asp Asp Phe Gly Gly
                580                 585                 590
Ser Gln Leu Glu Lys Leu Leu Tyr Gly Ser Val Asn His Glu Phe Glu
            595                 600                 605
Ser Ile Asp Leu Ser Asp Glu Val Ser Lys Gly Lys Leu Ile Lys Gln
        610                 615                 620
Ala Ile Arg Asn Gly Ile Ala Ser His Val Gln Thr Val Gly Lys Gly
625                 630                 635                 640
Gly Leu Leu Val Thr Leu Ala Lys Ile Ser Ala His Tyr Asp Leu Gly
                645                 650                 655
Met Gln Ala Gln Leu Asp Val Thr Asn Ala Gln Leu Phe Ser Glu Thr
            660                 665                 670
Gln Gly Arg Tyr Ile Val Val Lys Glu Gly Gln Thr Leu Asp Ile
        675                 680                 685
Asp Gln Ala Gln Glu Ile Gly His Leu Thr His Gln Gln Leu Phe Asp
        690                 695                 700
Ile Ser Asn Ser Asp Val Lys Ile Lys Glu Asn Val Ser Asp Ile Lys
705                 710                 715                 720
Gln Lys Trp Glu Gly Ala Ile Val Gln Cys Leu Thr Thr Gln Asp
                725                 730                 735
```

<210> 5644
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5644
```
Asp Lys Thr Gly Lys Asn Thr Val Ile Ser Arg Ile Tyr Asn Gln Met
1               5                   10                  15
Ile Lys Arg Val Arg Lys Trp Trp Ile Gly Gly Gly Thr Glu His Ile
            20                  25                  30
Tyr Pro Lys Ile Ile His Asn Leu Lys Trp Ile Pro Asn Ser Phe Leu
        35                  40                  45
```

<210> 5645
<211> 62
<212> PRT
<213> S.epidermidis

<400> 5645
```
Ile Asn Lys Gly Val Leu Ile Phe Arg Lys Asn Leu Arg Lys Tyr Ala
1               5                   10                  15
Asn Leu Ser Lys Glu Cys Thr Val Ile Gly Val Ser Asn Arg Ile Glu
            20                  25                  30
Ile Trp Asp Arg Glu Thr Trp Asn Asp Phe Tyr Asp Glu Ser Glu Glu
        35                  40                  45
Ser Phe Glu Asp Ile Ala Glu Asp Leu Ile Asp Phe Asp Phe
    50                  55                  60
```

<210> 5646

```
<211> 419
<212> PRT
<213> S.epidermidis

<400> 5646
Lys Glu Arg Gly Asn Leu Leu Lys Val Leu Ile Val Gly Ala Gly Gly
1               5                   10                  15
Arg Glu His Thr Leu Ala Ser Lys Ile Asn Gln Ser Pro Ile Val Asp
                20                  25                  30
Lys Val Tyr Ala Ile Pro Gly Asn Asp Ala Met Val Asn Ile Ala Glu
            35                  40                  45
Val His Ser Glu Ile Ala Glu Ser Asp His Gln Ala Ile Leu His Phe
        50                  55                  60
Ala Gln His Asn Ala Ile Asp Trp Val Ile Ile Gly Pro Glu Gln Pro
65                  70                  75                  80
Leu Ile Asp Gly Leu Ala Asp Leu Leu Arg Asn Ala Asn Ile Lys Val
                85                  90                  95
Phe Gly Pro Gly Gln Asp Ala Ala Gln Ile Glu Gly Ser Lys Leu Phe
                100                 105                 110
Ala Lys Gln Leu Met Asp Lys Tyr Arg Ile Pro Thr Ala Glu Tyr Lys
            115                 120                 125
Glu Val Ser Ser Arg Asn Glu Ala Leu Gln Tyr Val Glu Thr Cys Asp
        130                 135                 140
Leu Pro Ile Val Ile Lys Lys Asp Gly Leu Ala Ala Gly Lys Gly Val
145                 150                 155                 160
Ile Ile Ala Phe Thr Arg Glu Asp Ala Leu Glu Gly Val Lys Lys Ile
                165                 170                 175
Tyr Gln Glu Glu Lys Gly Lys Val Val Phe Glu Ser Tyr Leu Glu Gly
            180                 185                 190
Glu Glu Phe Ser Leu Met Thr Phe Val Asn Gly Asp Tyr Ala Val Pro
            195                 200                 205
Phe Asp Cys Ile Ala Gln Asp His Lys Arg Ala Phe Asp Asn Asp Gln
        210                 215                 220
Gly Pro Asn Thr Gly Gly Met Gly Ala Tyr Cys Pro Val Pro His Ile
225                 230                 235                 240
Asp Ala Ser Val Leu Glu Gln Thr Asn Lys Glu Ile Ala Gln Pro Ile
                245                 250                 255
Ala Lys Ala Met Ala Gln Glu Gly His Asp Phe Phe Gly Leu Leu Tyr
            260                 265                 270
Ile Gly Ala Ile Leu Thr Lys Asp Gly Pro Lys Val Ile Glu Phe Asn
            275                 280                 285
Ala Arg Phe Gly Asp Pro Glu Ala Gln Val Leu Leu Thr Arg Leu Glu
        290                 295                 300
Ser Asp Leu Met Gln Leu Ile Ile Asp Leu Glu Asn Cys Gln Pro Ile
305                 310                 315                 320
His Phe Asn Trp Lys Asp Glu Ala Val Val Gly Val Met Leu Ala Ser
                325                 330                 335
Lys Gly Tyr Pro Gly Ser Tyr Glu Lys Gly His Glu Ile Ser Gly Phe
            340                 345                 350
Asn Leu Asp Ser His Tyr Tyr Val Ser Gly Leu Lys Lys Glu Gly Gln
        355                 360                 365
Cys Phe Val Asn Ser Gly Gly Arg Val Ile Leu Ala Ile Gly Glu Gly
        370                 375                 380
Pro Thr Val Glu Lys Ala Gln Ala Asn Ala Tyr Glu His Ala Arg Gln
385                 390                 395                 400
Ile Lys Ser Asp Asn Leu Phe Tyr Arg Asn Asp Ile Gly Asn Lys Ala
```

```
                    405                   410                   415
Ile Thr Lys


<210> 5647
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5647
Cys Val Phe Ile Phe Ile Lys Gly Gly Thr Phe Met Gly Lys Gln Cys
1               5                   10                  15
Phe Val Thr Gly Arg Lys Ala Ser Thr Gly Asn His Arg Ser His Ala
            20                  25                  30
Leu Asn Ala Asn Lys Arg Arg Trp Asn Ala Asn Leu Gln Lys Val Arg
        35                  40                  45
Ile Leu Val Asp Gly Lys Pro Lys Lys Val Trp Val Ser Ala Arg Ala
        50                  55                  60
Leu Lys Ser Gly Lys Val Thr Arg Val
65                  70


<210> 5648
<211> 391
<212> PRT
<213> S.epidermidis

<400> 5648
Thr Lys Ile Ile Gly Lys Pro Tyr Ile Cys Ser Ile Arg Arg Ser Lys
1               5                   10                  15
Lys Val Ser Lys Phe Lys Ser Leu Leu Leu Leu Phe Gly Thr Leu Ile
            20                  25                  30
Leu Leu Ser Gly Cys Ser Asn Ile Glu Val Phe Asn Ala Lys Gly Pro
        35                  40                  45
Val Ala Ser Ser Gln Lys Phe Leu Ile Ile Tyr Ser Ile Ile Phe Met
        50                  55                  60
Leu Val Ile Val Ala Val Val Leu Ser Met Phe Ala Ile Phe Ile Phe
65                  70                  75                  80
Lys Tyr Ser Tyr Lys Lys Asn Ser Glu Ser Gly Lys Met His His Asn
                85                  90                  95
Ser Leu Ile Glu Thr Ile Trp Phe Val Val Pro Ile Leu Ile Val Ile
            100                 105                 110
Ala Leu Ala Ile Pro Thr Val Lys Thr Leu Tyr Asp Tyr Glu Lys Pro
            115                 120                 125
Pro Glu Lys Asp Lys Asp Pro Leu Val Val Tyr Ala Val Ser Ala Gly
        130                 135                 140
Tyr Lys Trp Phe Phe Ala Tyr Pro Asp Gln His Ile Glu Thr Val Asn
145                 150                 155                 160
Thr Leu Thr Ile Pro Lys Asp Arg Pro Val Val Phe Lys Leu Gln Ser
                165                 170                 175
Met Asp Thr Met Thr Ser Phe Trp Ile Pro Gln Leu Gly Gly Gln Lys
            180                 185                 190
Tyr Ala Met Thr Gly Met Thr Met Asn Trp Thr Leu Thr Ala Asp Gln
        195                 200                 205
Leu Gly Thr Phe Arg Gly Arg Asn Ser Asn Phe Asn Gly Glu Gly Phe
        210                 215                 220
Ser Arg Gln Thr Phe Lys Val His Ser Val Ser Gln Asn Asp Phe Asp
```

```
225                     230                     235                     240
Lys Trp Val Lys Glu Ala Lys Gly Lys Lys Thr Leu Ser Gln Asp Thr
                245                 250                 255
Phe Asp Lys Gln Leu Leu Pro Ser Thr Ser Asn Lys Glu Leu Thr Phe
            260                 265                 270
Ser Gly Thr His Met Ala Phe Val Asp Pro Ala Ala Asp Pro Glu Tyr
            275                 280                 285
Ile Phe Tyr Ala Tyr Lys Arg Tyr Asn Phe Glu Gln Lys Asp Pro Asn
        290                 295                 300
Phe Thr Ala Glu Glu Asp Leu Tyr Lys Asp Val Lys Asp Lys Pro Ile
305                 310                 315                 320
Lys Pro Ala Arg Lys Val His Ile Thr Asn Pro Asn Tyr Glu Arg His
                325                 330                 335
Gly Met Lys Pro Met Ile Leu Gly Asn Asn Glu Lys Tyr Asp Asn Glu
            340                 345                 350
Phe Lys Lys Glu Glu Asp His Asn Ser Lys Glu Met Glu Lys Ile Ser
            355                 360                 365
Lys Gly Ala Lys Asp Glu Asn Ala Ser Lys Leu His Lys Lys Glu His
        370                 375                 380
Asp Asp His Gly Gly Gly His
385                 390


<210> 5649
<211> 42
<212> PRT
<213> S.epidermidis


<400> 5649
Pro Lys Val Ile Arg Leu Ser Gln Tyr Ile Gly Asp Leu Ile Pro Glu
1               5                   10                  15
Leu Gln Val Asn Lys Ser Phe Gly Asp Asn Glu Thr Ala Ser Met Ser
            20                  25                  30
Asn Asn Ala Leu Ala Ile Phe Leu Ala Ile
        35                  40


<210> 5650
<211> 44
<212> PRT
<213> S.epidermidis


<400> 5650
Ala Gly Ile Phe Ala Phe Val Ile Asn Met Tyr Lys Ser Val Pro Ile
1               5                   10                  15
Pro Asp Ala Asn Lys Ala Ala Asp Ile Gly Arg Cys Val Lys Asn Gly
            20                  25                  30
Thr Ser Thr Val Asp Pro Asn Ile Ala Asn Lys Cys
        35                  40


<210> 5651
<211> 58
<212> PRT
<213> S.epidermidis


<400> 5651
Gly Lys Ser Ile His Phe Ala Cys Ala Ile Gly Ala Asn Leu Thr Met
1               5                   10                  15
```

```
Pro Met Lys Met Asp Thr Ile Tyr Pro Thr Ile Ile Pro Ile Ser Thr
            20                  25                  30
Gly Ile Ser Asp Lys Asn Pro Leu Lys Asn Pro Trp Thr Met Met Val
            35                  40                  45
Thr Ala Asn Val Ile Lys Ala Thr Ile Lys
    50                  55
```

<210> 5652
<211> 361
<212> PRT
<213> S.epidermidis

<400> 5652
```
Arg Asp Tyr Ile Arg Arg Asn Ser Val Met Thr Gln Asn Asp Leu Met
1               5                   10                  15
Ser Glu Leu Lys Gln Gln Ala Leu Val Asp Ile Asn Glu Ala Lys Asp
            20                  25                  30
Ala Gln Ala Leu Gln Glu Val Lys Val Lys Tyr Leu Gly Lys Lys Gly
            35                  40                  45
Ser Val Ser Gly Leu Met Lys Asn Met Lys Asp Leu Pro Asn Glu Asp
    50                  55                  60
Lys Pro Ala Tyr Gly Gln Lys Val Asn Glu Leu Arg Gln Thr Ile Gln
65                  70                  75                  80
Ser Glu Leu Asp Glu Arg Gln Lys Leu Ile Lys Glu Glu Lys Leu Asn
            85                  90                  95
Gln Gln Leu Ser Glu Glu Thr Ile Asp Val Thr Leu Pro Ser Arg His
            100                 105                 110
Ile Glu Ile Gly Ser Lys His Pro Leu Thr Arg Thr Val Glu Glu Ile
            115                 120                 125
Glu Asp Leu Phe Leu Gly Leu Gly Tyr Glu Ile Val Asp Gly Tyr Glu
            130                 135                 140
Val Glu Gln Asp Tyr Tyr Asn Phe Glu Ala Leu Asn Leu Pro Lys Ser
145                 150                 155                 160
His Pro Ala Arg Asp Met Gln Asp Ser Phe Tyr Ile Thr Glu Glu Ile
            165                 170                 175
Leu Met Arg Thr His Thr Ser Pro Val Gln Ala Arg Thr Met Glu Lys
            180                 185                 190
Arg Lys Gly Gln Gly Pro Val Lys Ile Ile Cys Pro Gly Lys Val Tyr
            195                 200                 205
Arg Arg Asp Ser Asp Asp Ala Thr His Ser His Gln Phe Thr Gln Ile
            210                 215                 220
Glu Gly Leu Val Val Asp Lys Asp Ile Lys Met Ser Asp Leu Lys Gly
225                 230                 235                 240
Thr Leu Glu Leu Val Ala Lys Lys Leu Phe Gly Ala Asp Arg Glu Ile
            245                 250                 255
Arg Leu Arg Pro Ser Tyr Phe Pro Phe Thr Glu Pro Ser Val Glu Val
            260                 265                 270
Asp Val Ser Cys Phe Lys Cys Lys Gly Gln Gly Cys Asn Val Cys Lys
            275                 280                 285
His Thr Gly Trp Ile Glu Ile Leu Gly Ala Gly Met Val His Pro Asn
    290                 295                 300
Val Leu Glu Met Ala Gly Phe Asp Ser Lys Glu Tyr Ser Gly Phe Ala
305                 310                 315                 320
Phe Gly Met Gly Pro Asp Arg Ile Ala Met Leu Lys Tyr Gly Ile Glu
            325                 330                 335
Asp Ile Arg His Phe Tyr Thr Asn Asp Val Arg Phe Leu Asp Gln Phe
```

```
                340                      345                      350
Lys Ala Val Glu Asp Arg Gly Glu Gln
        355                  360
```

<210> 5653
<211> 84
<212> PRT
<213> S.epidermidis

<400> 5653

```
Glu Met Asn Ile Ile Pro Arg Thr Ser Leu Ile Ile Tyr Leu Lys His
1               5                   10                  15
Met Lys His Glu Arg Gln Ile Arg Lys Tyr Gly His Ile Val His Ser
            20                  25                  30
Asn Arg Gln Arg Lys Tyr Val Val Met Tyr Ile Asn Glu Ala Asp Ala
        35                  40                  45
Asp Asn Ile Val His Lys Leu Met Gln Leu Lys Tyr Val His Glu Ile
    50                  55                  60
Gln Gly Ser Pro Tyr Lys Tyr Leu Lys Lys Thr Tyr Glu Lys Glu Lys
65                  70                  75                  80
His Glu Ile Gln
```

<210> 5654
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5654

```
Ile Tyr Phe Ile Leu Val Ser Leu His Ser Thr Asp Cys Lys Glu Thr
1               5                   10                  15
Phe Phe Met Lys Gly Asn Glu Ser Thr Trp Lys Met Ser Lys Cys Leu
            20                  25                  30
Ser Val Pro Phe Ser Gln Phe Leu Met
        35                  40
```

<210> 5655
<211> 442
<212> PRT
<213> S.epidermidis

<400> 5655

```
Thr Ile Phe Ile Tyr Asn Asn Phe Glu Val Asn Ser Met Ser Phe Leu
1               5                   10                  15
Arg Lys His Thr Glu Ile Ile Phe Ser Tyr Ile Ile Gly Ile Val Ser
            20                  25                  30
Leu Phe Thr Gly Leu Ile Ile Phe Ile Asn Leu Pro Leu Ile Lys Gln
        35                  40                  45
Phe Lys Gly Asp Lys Lys Val Asp Thr His Val His Asn Val Trp Glu
    50                  55                  60
Phe Leu Asn Ala Phe Phe Ala Glu Ile Ile Lys Val Met Ser Lys Phe
65                  70                  75                  80
Ile Gly Gly Phe Pro Ile Thr Ser Ala Ile Val Ile Ile Val Phe Gly
                85                  90                  95
Ile Leu Val Met Leu Leu Gly His Thr Leu Phe Arg Thr Ile Lys Tyr
            100                 105                 110
```

```
Asp Tyr Asp Ile Ser Ile Phe Phe Leu Val Ile Gly Ile Met Tyr Phe
        115                 120                 125
Ile Ile Thr Leu Leu Leu Met Thr Gln Val Tyr Gly Phe Phe Ala Ile
        130                 135                 140
Val Phe Ile Ile Pro Phe Thr Val His Ile Gly Tyr Ile Val Tyr Lys
145                 150                 155                 160
Asp Glu Leu Asn Gln Asp Asn Arg Lys Asn His Tyr Met Trp Ile Ile
                165                 170                 175
Val Thr Tyr Gly Met Ser Tyr Leu Ile Thr Gln Ile Ser Leu Tyr Gly
                180                 185                 190
Arg Ile Asp Ala Asn Glu Ile Glu Ser Ile Asp Ile Leu Ser Val Asn
                195                 200                 205
Thr Phe Phe Ile Ile Met Trp Leu Leu Gly Gln Met Ala Ile Trp Asn
        210                 215                 220
Phe Leu Phe Leu Arg Arg Ser Leu Pro Leu Thr Lys Glu Glu Leu Gly
225                 230                 235                 240
Glu Glu Glu Pro Glu Leu Ser Arg Thr Asn Lys Gly Asn Val Ser Asn
                245                 250                 255
Gln Thr Lys Val His Leu Lys Gln Leu Gln Asn Lys Thr Thr Glu Tyr
                260                 265                 270
Ala Arg Lys Thr Arg Arg Ser Val Asp Leu Asp Lys Ile Arg Ala Lys
                275                 280                 285
Arg Asp Lys Phe Lys Gln Lys Ile Asn Ser Ile Val Asp Ile Gln Glu
        290                 295                 300
Asp Asp Ile Pro Asn Trp Met Lys Lys Pro Lys Trp Val Lys Pro Met
305                 310                 315                 320
Tyr Val Gln Leu Phe Cys Gly Val Ile Ile Leu Phe Phe Ala Phe Leu
                325                 330                 335
Glu Phe Asn Asn Arg Asn Ala Leu Phe Leu Thr Gly Glu Trp Glu Leu
                340                 345                 350
Ser Gln Thr Gln Tyr Val Val Glu Trp Val Thr Leu Leu Leu Leu Leu
                355                 360                 365
Phe Ile Ile Ile Ile Tyr Ile Ala Thr Thr Leu Thr Tyr Tyr Leu Arg
        370                 375                 380
Asp Lys Tyr Tyr Tyr Leu Gln Leu Phe Met Gly Ser Ile Leu Phe Phe
385                 390                 395                 400
Lys Phe Leu Thr Glu Phe Ile Asn Ile Met Val His Gly Leu Leu Leu
                405                 410                 415
Ser Ile Phe Ile Thr Pro Ile Leu Leu Leu Met Leu Ile Ala Met Ile
        420                 425                 430
Val Ala Tyr Ser Leu Gln Leu Arg Glu Lys
        435                 440
```

<210> 5656
<211> 101
<212> PRT
<213> S.epidermidis

<400> 5656
```
Lys Met Phe Met Gly Glu Phe Asp His Gln Leu Asp Thr Lys Gly Arg
1               5                   10                  15
Met Ile Ile Pro Ser Lys Phe Arg Tyr Asp Leu Asn Glu Arg Phe Ile
                20                  25                  30
Ile Thr Arg Gly Leu Asp Lys Cys Leu Phe Gly Tyr Thr Leu Glu Glu
        35                  40                  45
Trp Gln Gln Ile Glu Glu Lys Met Lys Thr Leu Pro Met Thr Lys Lys
```

```
        50                      55                      60
Asp Ala Arg Lys Phe Met Arg Met Phe Ser Ser Gly Ala Val Glu Val
65                      70                      75                      80
Glu Leu Asp Lys Gln Gly Arg Ile Asn Ile Pro Gln Lys Phe Lys Glu
                    85                      90                      95
Ile Cys Gln Phe Lys
                100
```

<210> 5657
<211> 47
<212> PRT
<213> S.epidermidis

<400> 5657
```
Val Lys Ile Ile Leu Ile Asn Val Lys Lys Leu Ser Ile Thr Tyr Arg
1                   5                      10                      15
Ser Val Ile Ile Val Ser Arg Cys Lys Ile Tyr Met Leu Lys Thr Ile
                    20                      25                      30
Leu Asn Glu Leu Asn Leu Ala Ile Gly Phe Gly Lys Val Lys Leu
                35                      40                      45
```

<210> 5658
<211> 571
<212> PRT
<213> S.epidermidis

<400> 5658
```
Asp Asn Tyr Ile Gln Arg Arg Asp Tyr Ile Met Lys Lys Ser Ser Lys
1                   5                      10                      15
Phe Ser Lys Asp Phe Pro Thr Arg Lys Asn His Tyr Ala Ile Arg Lys
                    20                      25                      30
Phe Thr Val Gly Thr Ala Ser Ile Ile Val Gly Ser Phe Leu Phe Phe
                35                      40                      45
Gly Gln Thr Gln Ala His Ala Glu Gln Ala Glu Glu Phe Glu Arg Val
        50                      55                      60
Thr Thr Gly Thr Val Asp Thr Gly Gly Gln Pro Ala Arg Ala Asp Gln
65                      70                      75                      80
Gly Gln Glu Gly Pro Gln Ala Gly Ala Asp Thr His Asn Thr Ala Ser
                    85                      90                      95
Gln Pro Gly Val Thr Gly Gln Asp Ala Pro Asn Glu Asn His Ala Gly
                    100                     105                     110
Asp Gln Asn Ala Ala Val Thr His Pro Ala Asn Gln Glu Asn Asn Ala
                115                     120                     125
Pro Gln Val Gly Ala Gly Thr Pro Gly Ala Glu Asn Thr Pro Gln Ala
        130                     135                     140
Gly Gly Glu Asn His Asn Gln Asp Thr Ala Val Thr Ser Ala Gly Thr
145                     150                     155                     160
Asn Gly Glu Gln Asn Gly Gly Lys Pro Ala Thr Ser Thr Thr Gly Gln
                    165                     170                     175
Asp Ala Ala Gln Ser Asn Gly Pro Gln Gly Thr Ser Val Ala Gln Pro
                180                     185                     190
Gly Asn Asp Ala Ser Ser Gln Gly His Asp Thr Pro Gln Ala Asp Ala
                195                     200                     205
Gly Thr His Asn Thr Glu Gly Gln Pro Ala Val Thr Thr Gly Glu Gln
        210                     215                     220
Thr Gly Gly Lys Pro Ala Ala Thr Lys Pro Glu Gly Ala Ser Ala Glu
```

```
225                    230                    235                    240
Thr Ala Pro Ala Pro Asn Asn Ala Asp Glu Asn His Ala Gln Pro Ser
                245                    250                    255
Pro Gln Thr Gly Gly Thr Thr Ala Thr Gln Ala Gly Gln Val Lys Pro
                260                    265                    270
Ser Gly Asp Ser Thr Pro Thr Gly Glu Pro Asn Lys Ala Asp Asp Gln
                275                    280                    285
Asp Thr Gln Ile Lys Pro Thr Ser Asn Gln Gly Thr Thr Ala Thr Thr
        290                    295                    300
Asn Glu Ile Gly Asn Gln Lys Pro Ser Gly Gln Thr Gly Asn Thr Glu
305                    310                    315                    320
Asn Thr Pro Asn Asp Gly Thr Gln Val Lys Pro Asn Asn Asp Pro Ala
                325                    330                    335
Val Thr Gly Thr Pro Asn Thr Asn Gly Glu Gln Thr Gly Gln Pro Asn
                340                    345                    350
Ala Thr Val Thr Pro Gly Gln Gly Asn Glu Glu Ile Asn Gly Ala Ser
                355                    360                    365
Lys Pro Gly Glu Val Ser Pro Lys Pro Glu Glu Asn Asn Pro Thr Ala
        370                    375                    380
Thr Glu Pro Gly Thr Thr Ala Pro Gly Asn Thr Asn Gln Asp Thr Gln
385                    390                    395                    400
Val Lys Pro Asn Thr Asp Gln Thr Ala Thr Gly Thr Pro Ala Gly Thr
                405                    410                    415
Asp Asn Gln Asn Thr Gln Gln Gly Asn Thr Glu Gln Asn Asn Gln Asn
                420                    425                    430
Ala Gln Pro Ser Ala Pro Gly Thr Thr Asp Gln Ala Gly Ala Thr Val
                435                    440                    445
Lys Pro Gly Ser Ala Pro Asn Gln Asp Thr Glu Ala Thr Pro Asn Pro
        450                    455                    460
Asp Gln Asn Asn Thr Pro Thr Asn Gly Gln Asp Gly Asp Gln Thr Asn
465                    470                    475                    480
Gln Ser Thr Gln Asp Asp Asn Asp Asn Gln Asn Thr Gln Gln Gly Asn
                485                    490                    495
Thr Lys Gln Asn Asn Gln Asn Ala Glu Gln Gly Asn Thr Gly Gly Thr
        500                    505                    510
Asp Lys Asp Ala Lys Val Asn Thr Asn Asp Asp Glu Thr Lys Thr Asp
        515                    520                    525
Val Lys Asn Asp Thr Glu Leu Pro Glu Thr Gly Leu Ser Asn Glu Tyr
        530                    535                    540
Asp Tyr Thr Thr Thr Val Phe Gly Ser Ile Ala Leu Ile Ser Ser Leu
545                    550                    555                    560
Leu Leu Leu Arg Arg Gln Arg Lys Glu Ser Lys
                565                    570
```

```
<210> 5659
<211> 136
<212> PRT
<213> S.epidermidis

<400> 5659
His Met Asp Ile Pro Lys Ile Thr Thr Phe Leu Met Phe Asn Asp Glu
1                   5                    10                   15
Ala Glu Glu Ala Ile Gln Leu Tyr Thr Ser Leu Phe Glu Asp Ser Glu
                20                   25                   30
Ile Ile Thr Met Val Lys Tyr Gly Glu Glu Gly Pro Gly Thr Pro Gly
        35                   40                   45
```

Ser Val Gln His Ser Ile Phe Thr Leu Asn Gly Gln Val Phe Met Ala
    50   55   60
Ile Asp Ala Asn Ser Gly Glu Glu Leu Pro Met Asn Pro Ala Met Ser
65   70   75   80
Leu Tyr Val Thr Val Lys Asp Thr Met Glu Met Glu Arg Leu Phe Asn
           85   90   95
Gly Leu Lys Asn Glu Gly Ala Ile Leu Met Pro Lys Thr Glu Met Pro
          100   105   110
Pro Phe Arg Glu Phe Ala Trp Val Gln Asp Lys Phe Gly Val Ser Phe
          115   120   125
Gln Leu Ala Leu Pro Glu Asn Lys
          130   135

<210> 5660
<211> 785
<212> PRT
<213> S.epidermidis

<400> 5660
Arg Asp Cys Met Arg Gln Lys Thr Leu Asp Val Leu Glu Phe Glu Lys
1   5   10   15
Ile Lys Ser Phe Val Ala Asp Glu Thr Ile Ser Asp Leu Gly Arg Glu
          20   25   30
Lys Val Gln Glu Met Ala Pro Ala Ser Asn Phe Asp Thr Val Glu Phe
          35   40   45
Gln Met Asn Glu Thr Asp Glu Ile Ser Gln Ile Tyr Asn Lys His Arg
          50   55   60
Leu Pro Ser Leu Ser Gly Leu Ala Lys Val Ser Pro Leu Val His Arg
65   70   75   80
Ala Ser Ile Gly Gly Val Leu Asn Val Gly Glu Leu Asn Arg Ile Lys
                85   90   95
Arg Leu Val Gln Val Gln Asn Gln Phe Lys Thr Phe Tyr Asn Gln Met
          100   105   110
Leu Glu Glu Asp Glu Glu Val Lys Tyr Pro Ile Leu His Asp Lys Met
          115   120   125
Asn His Leu Pro Ile Leu Thr Asp Leu Phe Lys Glu Ile Asn Glu Lys
          130   135   140
Cys Asp Ala His Asp Leu Phe Asp His Ala Ser Tyr Thr Leu Gln Ser
145   150   155   160
Ile Arg Ser Lys Ile Ser Arg Thr Asn Gln Arg Ile Arg Gln Asn Leu
          165   170   175
Asp Arg Ile Val Lys Asn Gln Gly Asn Gln Lys Lys Leu Ser Asp Ala
          180   185   190
Ile Val Thr Val Arg Asn Asp Arg Asn Val Ile Pro Val Lys Ala Glu
          195   200   205
Tyr Arg Gln Asp Phe Asn Gly Ile Val His Asp Gln Ser Ala Ser Gly
          210   215   220
Gln Thr Leu Tyr Ile Glu Pro Asn Ser Val Val Glu Met Asn Asn Gln
225   230   235   240
Ile Ser Arg Leu Arg Asn Asp Glu Ala Val Glu Arg Glu Arg Ile Leu
          245   250   255
Thr Glu Leu Thr Gly Leu Val Ser Ala Glu Ser Asp Ala Leu Leu Val
          260   265   270
Ala Glu Ser Val Met Gly Gln Ile Asp Phe Leu Ile Ala Lys Ala Arg
          275   280   285
Tyr Ala Arg Thr Ile Lys Gly Thr Lys Pro Thr Phe Lys Glu Asp Arg

```
            290                      295                      300
Thr Ile Tyr Leu Pro Asn Ala Phe His Pro Leu Leu Asp Lys Asp Thr
305                      310                      315                      320
Val Val Ala Asn Thr Ile Glu Phe Ile Asp Asp Val Glu Thr Val Ile
                    325                      330                      335
Ile Thr Gly Pro Asn Thr Gly Gly Lys Thr Val Thr Leu Lys Thr Leu
                    340                      345                      350
Gly Leu Ile Ile Val Met Ala Gln Ser Gly Leu Leu Ile Pro Thr Leu
                    355                      360                      365
Asp Gly Ser Gln Leu Ser Ile Phe Glu Asn Val Tyr Cys Asp Ile Gly
            370                      375                      380
Asp Glu Gln Ser Ile Glu Gln Ser Leu Ser Thr Phe Ser Ser His Met
385                      390                      395                      400
Lys Asn Ile Val Glu Ile Leu Gln Asp Ala Asp Gln Asn Ser Leu Ile
                    405                      410                      415
Leu Phe Asp Glu Leu Gly Ala Gly Thr Asp Pro Ser Glu Gly Ala Ala
                    420                      425                      430
Leu Ala Met Ser Ile Leu Asp Tyr Val Arg Arg Leu Gly Ser Leu Val
                    435                      440                      445
Met Ala Thr Thr His Tyr Pro Glu Leu Lys Ala Tyr Ser Tyr Asn Arg
            450                      455                      460
Glu Gly Val Met Asn Ala Asn Val Glu Phe Asp Val Asp Thr Leu Ser
465                      470                      475                      480
Pro Thr Tyr Lys Leu Leu Met Gly Val Pro Gly Arg Ser Asn Ala Phe
                    485                      490                      495
Asp Ile Ser Lys Lys Leu Gly Leu Ser Leu Asn Ile Ile Asn Lys Ala
                    500                      505                      510
Lys Thr Met Ile Gly Thr Asp Glu Gln Glu Ile Asn Ala Met Ile Glu
                    515                      520                      525
Ser Leu Glu His Asn Ser Lys Arg Val Asp Gln Gln Arg Ile Glu Leu
            530                      535                      540
Asp Arg Leu Val Arg Glu Ala Gln Glu Thr His Asp Ala Leu Ser Lys
545                      550                      555                      560
Gln Tyr Gln Gln Tyr Gln Asn Tyr Glu Lys Ser Leu Met Glu Glu Ala
                    565                      570                      575
Lys Glu Lys Ala Asn Gln Arg Val Lys Ser Ala Thr Lys Glu Ala Asp
                    580                      585                      590
Glu Ile Leu Lys Glu Leu Arg Asn Leu Arg Asp His Lys Gly Ala Glu
                    595                      600                      605
Val Lys Glu His Glu Leu Ile Asp Lys Lys Lys Gln Leu Asp Asp Gln
            610                      615                      620
Tyr Glu Ala Lys Ser Ile Lys Gln His Val Gln Lys Lys Lys Tyr Asp
625                      630                      635                      640
Thr Ile His Ala Gly Asp Glu Val Lys Val Leu Ser Tyr Gly Gln Lys
                    645                      650                      655
Gly Glu Val Leu Glu Leu Val Gly Asn Glu Glu Ala Val Val Gln Met
                    660                      665                      670
Gly Ile Ile Lys Met Lys Leu Pro Ile Glu Asp Leu Glu Lys Thr Lys
                    675                      680                      685
Lys Lys Lys Glu Lys Pro Thr Lys Met Val Thr Arg Gln Asn Arg Gln
            690                      695                      700
Thr Ile Lys Thr Glu Leu Asp Leu Arg Gly Tyr Arg Tyr Glu Glu Ala
705                      710                      715                      720
Leu Asn Glu Leu Asp Gln Tyr Leu Asp Gln Ala Val Leu Ser Asn Tyr
                    725                      730                      735
Glu Gln Val Tyr Ile Ile His Gly Lys Gly Thr Gly Ala Leu Gln Lys
```

```
                740                    745                    750
Gly Val Gln Gln His Leu Lys Lys His Lys Ser Val Arg Gln Phe Arg
        755                    760                    765
Gly Gly Met Pro Ser Glu Gly Gly Phe Gly Val Thr Val Ala Glu Leu
    770                    775                    780
Lys
785
```

<210> 5661
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5661
```
Gly Gly Leu Ile Met Ala Val Pro Lys Arg Arg Thr Ser Lys Thr Arg
1               5                   10                  15
Lys Asn Lys Arg Arg Thr His Phe Lys Ile Ser Val Pro Gly Met Thr
            20                  25                  30
Glu Cys Pro Asn Cys Gly Glu Tyr Lys Leu Ser His Arg Val Cys Lys
        35                  40                  45
Asn Cys Gly Ser Tyr Asn Gly Glu Glu Val Val Ser Lys
    50                  55                  60
```

<210> 5662
<211> 1211
<212> PRT
<213> S.epidermidis

<400> 5662
```
Phe Leu Ile Ile Val Asn Ile Ala Pro Ser Leu Ser Thr Gln His Asp
1               5                   10                  15
Cys Asp Lys Glu Asn Thr Met Val Tyr Leu Lys Ser Ile Asp Ala Ile
            20                  25                  30
Gly Phe Lys Ser Phe Ala Asp His Thr Asn Val Gln Phe Asp Lys Gly
        35                  40                  45
Val Thr Ala Ile Val Gly Pro Asn Gly Ser Gly Lys Ser Asn Ile Thr
    50                  55                  60
Asp Ala Ile Lys Trp Val Leu Gly Glu Gln Ser Ala Lys Ser Leu Arg
65                  70                  75                  80
Gly Ala Lys Met Glu Asp Ile Ile Phe Ser Gly Ala Glu His Arg Lys
                85                  90                  95
Ala Gln Asn Phe Ala Glu Val Lys Leu Lys Leu Asp Asn His Ser Gln
                100                 105                 110
Lys Leu Gln Ile Asp Ser Glu Glu Leu Val Val Thr Arg Arg Leu Tyr
            115                 120                 125
Arg Ser Gly Glu Ser Glu Tyr Tyr Leu Asn Asn Asp Arg Ala Arg Leu
    130                 135                 140
Lys Asp Ile Ile Asp Leu Phe Leu Asp Ser Gly Leu Gly Lys Glu Ala
145                 150                 155                 160
Phe Ser Ile Ile Ser Gln Gly Arg Val Asp Glu Ile Leu Asn Ala Lys
                165                 170                 175
Pro Ile Asn Arg Arg Gln Ile Ile Glu Glu Ser Ala Gly Val Leu Lys
            180                 185                 190
Tyr Lys Lys Arg Lys Ala Glu Ser Ile Gln Lys Leu Asp His Thr Glu
        195                 200                 205
Asp Asn Leu Asn Arg Val Glu Asp Ile Leu Tyr Asp Leu Glu Gly Arg
```

```
            210                     215                     220  .
Val Glu Pro Leu Lys Glu Glu Ala Ala Ile Ala Lys Glu Tyr Lys Gln
225                     230                     235                     240
Leu Ser Lys Glu Met Glu Gln Ser Asp Val Ile Val Thr Val Ser Asp  .
                245                     250                     255
Ile Asp His Tyr Thr Glu Asp Asn Gln Arg Leu Asp Glu Arg Leu Asn
                260                     265                     270
His Leu Lys Ser Gln Gln Ala Glu Lys Glu Gly Gln Gln Ala Gln Ile
        275                     280                     285
Asn Gln Leu Leu Gln Lys Tyr Lys Gly Lys Arg Gln Gln Asn Asp Tyr
        290                     295                     300
Asp Ile Glu Lys Leu Asn Tyr Glu Leu Val Lys Ala Thr Glu Asn Tyr
305                     310                     315                     320
Glu Gln Leu Ser Gly Lys Leu Asn Val Leu Glu Glu Arg Lys Lys Asn
                325                     330                     335
Gln Ser Glu Thr Asn Ala Arg Tyr Glu Glu Glu Leu Asp Asn Leu Glu
                340                     345                     350
Ser Gln Ile Asp Ser Ile Lys Asn Glu Lys Ala Gln Asn Glu Lys Leu
        355                     360                     365
Leu Ala Asp Leu Lys Asn Lys Gln Lys Gln Leu Asn Lys Glu Val Gln
        370                     375                     380
Glu Leu Glu Ser Leu Leu Tyr Ile Ser Asp Glu Gln His Asp Glu Lys
385                     390                     395                     400
Leu Glu Glu Ile Lys Asn Ser Tyr Tyr Thr Leu Met Ser Glu Gln Ser
                405                     410                     415
Val Val Asn Asn Asp Ile Arg Phe Leu Glu His Thr Ile Asn Glu Asn
        ·       420                     425                     430
Glu Ala Lys Lys Ser Arg Leu Asp Ser Arg Leu Val Glu Ala Phe Asn
        435                     440                     445
Gln Leu Lys Asp Ile Gln Gln Asn Ile Thr Gln Thr Gln Lys Glu Tyr
        450                     455                     460
Gln Ser Ser Lys Lys Ser Met Glu Lys Val Glu Gln Asn Ile Gln Gln
465                     470                     475                     480
Leu Glu Gln Gln Leu Thr Asp Ser Lys Arg Leu Leu Ser Glu Tyr Glu
                485                     490                     495
Asn Lys Leu Tyr Gln Ala Tyr Arg Tyr Asn Glu Lys Leu Lys Ser Arg
                500                     505                     510
Ile Asp Ser Leu Ala Thr Gln Glu Glu Asp Tyr Thr Tyr Phe Phe Asn
        515                     520                     525
Gly Val Lys His Ile Leu Lys Ala Lys Asp Lys Glu Leu Arg Gly Ile
        530                     535                     540
His Gly Ala Val Ala Glu Val Ile Asn Val Pro Ser Glu Met Thr Gln
545                     550                     555                     560
Ala Ile Glu Thr Ala Leu Gly Ala Ser Leu Gln His Val Ile Val Asp
                565                     570                     575
Asn Glu Lys Asp Gly Arg Gln Ala Ile Gln Tyr Leu Lys Gln Arg Gly
                580                     585                     590
Leu Gly Arg Ala Thr Phe Leu Pro Leu Asn Val Ile Gln Pro Arg His
        595                     600                     605
Val Ala Ala Asp Ile Lys Asp Val Ala Arg Gly Ser Gln Gly Phe Ile
        610                     615                     620
Asn Ile Ala Ser Asp Ala Ile Asn Val Ser Ala Lys Tyr Gln Asn Ile
625                     630                     635                     640
Ile Glu Asn Leu Leu Gly Asn Thr Ile Ile Val Glu Asn Leu Lys His
                645                     650                     655
Ala Asn Glu Leu Ala Arg Ala Ile Arg Tyr Arg Thr Arg Ile Val Thr
```

```
                    660                      665                      670
Leu Glu Gly Asp Val Val Asn Pro Gly Gly Ser Met Thr Gly Gly Gly
          675                      680                      685
Ala Arg Lys Thr Lys Ser Ile Leu Ser Gln Lys Asp Glu Leu Ser Thr
          690                      695                      700
Met Arg Asn Gln Leu Glu Asp Tyr Gln Arg Gln Thr Ala Glu Phe Glu
705                      710                      715                      720
Arg Gln Phe Lys Glu Gln Lys Thr Gln Ala Glu Gln Leu Ser Glu Gln
              725                      730                      735
Tyr Phe Ser Ala Ser Gln Gln Tyr Asn Asn Leu Lys Glu Gln Val His
          740                      745                      750
His His Glu Leu Glu Leu Asp Arg Leu Lys Thr Gln Glu Ala His Leu
          755                      760                      765
Lys Asn Glu His Glu Glu Phe Glu Phe Glu Lys Asn Asp Gly Tyr Gln
          770                      775                      780
Ser Asp Lys Ser Lys Glu Thr Leu Lys Glu Lys Gln Asn His Leu Ile
785                      790                      795                      800
Glu Ile Gln Gln Gln Leu Lys Gln Leu Glu Ser Asp Ile Glu Arg Tyr
              805                      810                      815
Thr Gln Leu Ser Lys Glu Gly Lys Ala Ser Thr His Gln Thr Gln Gln
          820                      825                      830
Gln Leu His Gln Lys Gln Ser Asp Leu Ala Val Val Lys Glu Arg Ile
          835                      840                      845
Lys Ser Gln Lys Gln Val Tyr Glu Arg Leu Asp Lys Gln Leu Ser Asp
          850                      855                      860
Ser Glu Arg Gln Lys Ile Glu Val Asn Glu Lys Ile Lys Leu Phe Asn
865                      870                      875                      880
Ser Asp Glu Met Met Gly Lys Asp Ala Phe Glu Lys Leu Lys Glu Gln
              885                      890                      895
Ile Gln Gln Gln Glu Asn Val Arg Gln Asn Leu Asn Gln Gln Leu Ser
          900                      905                      910
Glu Ile Lys Gln Gln Arg Lys Asp Leu Asn Glu Lys Ile Glu Ile Asn
          915                      920                      925
Glu Ser Gln Leu Gln Lys Cys His Gln Asp Ile Leu Ser Ile Glu Asn
          930                      935                      940
His Tyr Gln Asp Ile Lys Ala Lys Gln Ser Lys Leu Asp Val Leu Ile
945                      950                      955                      960
Asn His Ala Ile Asp His Leu Asn Asp Thr Tyr Gln Leu Thr Val Glu
              965                      970                      975
Arg Ala Arg Met Glu Tyr Asp Ser Asp Glu Thr Ile Asp Asn Leu Arg
          980                      985                      990
Lys Lys Val Lys Leu Thr Lys Met Ser Ile Asp Glu Leu Gly Pro Val
          995                      1000                     1005
Asn Leu Asn Ala Ile Glu Gln Phe Glu Glu Leu Asn Glu Arg Tyr Thr
          1010                     1015                     1020
Phe Leu Asn Glu Gln Arg Thr Asp Leu Arg Glu Ala Lys Glu Thr Leu
1025                     1030                     1035                     1040
Glu Gln Ile Ile His Glu Met Asp Lys Glu Val Glu Gly Arg Phe Lys
              1045                     1050                     1055
Thr Thr Phe His Ala Val Gln Asp His Phe Thr Thr Val Phe Lys Gln
          1060                     1065                     1070
Leu Phe Gly Gly Gly Gln Ala Glu Leu Arg Leu Thr Glu Asp Asp Tyr
          1075                     1080                     1085
Leu Ser Ala Gly Val Asp Ile Ile Val Gln Pro Pro Gly Lys Lys Leu
          1090                     1095                     1100
Gln His Leu Ser Leu Leu Ser Gly Gly Glu Arg Ala Leu Ser Ala Ile
```

```
1105                    1110                    1115                    1120
Ala Leu Leu Phe Ala Ile Leu Lys Val Arg Ser Ala Pro Phe Val Ile
                    1125                    1130                    1135
Leu Asp Glu Val Glu Ala Ala Leu Asp Glu Ala Asn Val Ile Arg Tyr
                1140                    1145                    1150
Ala Gln Tyr Leu Asn Glu Leu Ser Thr Glu Thr Gln Phe Ile Val Ile
            1155                    1160                    1165
Thr His Arg Lys Gly Thr Met Glu Phe Ser Asp Arg Leu Tyr Gly Val
        1170                    1175                    1180
Thr Met Gln Glu Ser Gly Val Ser Lys Leu Val Ser Val Asn Leu Asn
1185                    1190                    1195                    1200
Thr Ile Asp Glu Val Met Lys Glu Glu Gln Ala
                    1205                    1210
```

```
<210> 5663
<211> 778
<212> PRT
<213> S.epidermidis


<400> 5663
Cys Val Ile Met Ala Lys Arg Lys Ile Lys Ile Lys Lys Asn Lys Ile
1               5                   10                  15
Gly Ala Val Leu Leu Val Gly Leu Phe Gly Leu Leu Phe Phe Ile Leu
            20                  25                  30
Val Leu Arg Phe Ser Tyr Val Met Ile Thr Gly His Ser Asn Gly Gln
        35                  40                  45
Asp Leu Ile Met Lys Ala Asn Glu Lys Tyr Leu Val Lys Asn Ser Gln
    50                  55                  60
Gln Pro Glu Arg Gly Lys Ile Tyr Asp Arg Asn Gly Lys Val Leu Ala
65                  70                  75                  80
Glu Asp Val Glu Arg Tyr Lys Leu Val Ala Val Val Asp Lys Lys Ala
                85                  90                  95
Ser Lys Glu Ser Lys Lys Pro Arg His Val Val Asp Lys Lys Lys Thr
            100                 105                 110
Ala Lys Lys Leu Ala Glu Ile Ile Asp Met Asp Ala Asp Glu Ile Glu
        115                 120                 125
Lys Arg Leu Asn Asn Lys Lys Ala Phe Gln Ile Glu Phe Gly Gln Lys
    130                 135                 140
Gly Thr Asn Leu Thr Tyr Gln Glu Lys Glu Lys Ile Glu Lys Met Lys
145                 150                 155                 160
Leu Pro Gly Ile Ala Leu Tyr Pro Glu Thr Glu Arg Phe Tyr Pro Asn
                165                 170                 175
Gly Asn Phe Ala Ser His Leu Ile Gly Met Ala Gln Lys Asp Pro Asp
            180                 185                 190
Thr Gly Glu Leu Asn Gly Ala Leu Gly Val Glu Lys Ile Phe Asn Ser
        195                 200                 205
Tyr Leu Asn Gly Ser Arg Gly Ala Leu Lys Tyr Ile His Asp Ile Trp
    210                 215                 220
Gly Tyr Ile Ala Pro Asn Thr Lys Lys Glu Gln Gln Pro Lys Arg Gly
225                 230                 235                 240
Asp Asp Val His Leu Thr Ile Asp Ser Asn Ile Gln Val Phe Val Glu
                245                 250                 255
Glu Ala Leu Asp Asp Met Val Glu Arg Tyr Ala Pro Lys Asp Leu Phe
            260                 265                 270
Ala Val Val Met Asp Ala Lys Thr Gly Glu Ile Leu Ala Tyr Ser Gln
        275                 280                 285
```

```
Arg Pro Thr Phe Asn Pro Glu Thr Gly Lys Asp Phe Gly Lys Lys Trp
    290                 295             300
Ala Asn Asp Leu Tyr Gln Asn Thr Tyr Glu Pro Gly Ser Thr Phe Lys
305             310             315                 320
Thr Tyr Gly Leu Ala Ala Ala Ile Gln Glu Gly Lys Phe Lys Pro Asp
                325             330             335
Glu Lys Tyr Lys Ser Gly His Arg Asn Ile Met Gly Ser Glu Ile Ser
            340             345             350
Asp Trp Asn Lys Thr Gly Trp Gly Arg Ile Pro Met Ser Leu Gly Phe
        355             360             365
Thr Tyr Ser Ser Asn Thr Leu Met Met His Leu Gln Asp Leu Val Gly
    370             375             380
Ala Asp Lys Met Lys Ser Trp Tyr Glu Arg Phe Gly Phe Gly Lys Lys
385             390             395                 400
Thr Gly Gly Met Phe Asp Gly Glu Ala Ala Gly Asn Ile Gly Trp Ala
            405             410             415
Asn Glu Leu Gln Gln Lys Thr Ser Ala Phe Gly Gln Ser Thr Thr Val
            420             425             430
Thr Pro Ala Gln Met Ile Gln Ala Gln Ser Ala Phe Phe Asn Lys Gly
    435             440             445
Asn Met Leu Lys Pro Trp Phe Val Ser Ser Ile Asp Asn Pro Ile Thr
    450             455             460
Lys Lys Asn Tyr Tyr Ser Gly Lys Lys Glu Phe Ala Gly Lys Pro Val
465             470             475                 480
Thr Glu Glu Thr Ala Asn Lys Val Glu Glu Glu Leu Asp Lys Val Val
            485             490             495
Asn Ser Lys Lys Ser His Ala Met Asn Tyr Arg Val Lys Gly Tyr Asp
        500             505             510
Ile Glu Gly Lys Thr Gly Thr Ala Gln Val Ala Asp Ser Asn Gly Gly
    515             520             525
Gly Tyr Val Lys Gly Glu Asn Pro Tyr Phe Val Ser Phe Ile Gly Asp
    530             535             540
Ala Pro Lys Lys Lys Pro Lys Val Ile Val Tyr Ala Gly Met Ser Leu
545             550             555                 560
Ala Gln Lys Asn Asp Gln Glu Ala Tyr Glu Met Gly Val Ser Lys Ala
            565             570                 575
Phe Lys Pro Ile Met Glu Asn Thr Leu Lys Tyr Leu Asn Val Gly Lys
        580             585             590
Ser Ser Asp Thr Ser Ser Lys Thr Asp Phe Ser Lys Val Pro Asn Val
        595             600             605
Gln Gly Asp Glu Val Gln Lys Ala Glu Asp Ser Val Asn Ala Gln Ser
    610             615             620
Leu Lys Pro Ile Thr Ile Gly Asn Gly Lys Gln Ile Lys Gln Gln Ser
625             630             635                 640
Val Lys Ser Gly Thr Lys Val Leu Pro His Ser Lys Val Met Leu Met
            645             650             655
Thr Asp Gly Glu Leu Thr Met Pro Asp Met Thr Gly Trp Thr Lys Glu
            660             665             670
Asp Val Leu Ala Phe Glu Asp Leu Thr Lys Ile Lys Val Ser Thr Lys
        675             680             685
Gly Asn Gly Phe Val Thr Asn Gln Ser Ile Ser Lys Gly Gln Ile Ile
    690             695             700
Lys Asn Lys Asp Lys Ile Glu Val Ser Leu Ser Ala Glu Asp Thr Asp
705             710             715                 720
Asp Asp Gln Glu Lys Thr Asp Glu Asp Ser Ser Asp Asn Lys Ser Lys
            725             730             735
```

```
Lys Asp Lys Ala Asp Glu Asp His Ser Asn Thr Ser Ser Ser Thr Lys
            740                 745                 750
Asn Asp Lys Ser Asn Ala Asp Ser Lys Asn Asp Ser Asp Asp Ser Thr
            755                 760                 765
Asn Glu Thr Ser Gly Ser Glu Arg Asn Asn
        770                 775
```

<210> 5664
<211> 281
<212> PRT
<213> S.epidermidis

<400> 5664
```
Tyr Val Val Ile Gly Asp Asp Thr Met Ala Leu Tyr Asp Phe Ala Lys
1               5                   10                  15
Gly Leu Ile Leu Glu Ala Gly Asn Lys Val Arg Leu Met Met Gln Glu
            20                  25                  30
Glu Leu Asp Ile Lys Thr Lys Ser Asn Pro Asn Asp Leu Val Thr Asn
            35                  40                  45
Val Asp Lys Ala Thr Glu Asn Tyr Leu Tyr Glu Thr Ile Leu His Asn
        50                  55                  60
Tyr Pro Asp His Gln Val Ile Gly Glu Glu Gly His Gly His Asn Leu
65                  70                  75                  80
Glu Tyr Leu Lys Gly Val Ile Trp Val Ile Asp Pro Ile Asp Gly Thr
                85                  90                  95
Leu Asn Phe Val His Gln Lys Glu Asn Phe Ala Ile Ser Ile Gly Ile
            100                 105                 110
Tyr His Asp Gly Lys Pro Tyr Ala Gly Phe Val Tyr Asp Val Met Lys
        115                 120                 125
Asp Val Leu Tyr His Ala Lys Val Gly Gln Gly Ala Phe Glu Asn Thr
        130                 135                 140
His Lys Leu Glu Met Ile Gln Asn Thr Glu Leu Lys Arg Ser Ile Ile
145                 150                 155                 160
Gly Ile Asn Pro Asn Trp Leu Ser Lys Pro Ile Leu Ser Asp Ile Phe
                165                 170                 175
Ser Ser Ile Val Asn Glu Ala Arg Ser Ala Arg Ala Tyr Gly Ser Ala
            180                 185                 190
Ala Leu Glu Ile Ile Ser Val Ala Lys Gly Gln Leu Ala Ala Tyr Leu
            195                 200                 205
Thr Pro Arg Leu Gln Pro Trp Asp Phe Ala Gly Gly Leu Leu Ile Leu
        210                 215                 220
Asn Glu Val Gly Gly Ile Gly Thr Asn Leu Leu Gly Asp Lys Leu Asp
225                 230                 235                 240
Phe Asn Gln Pro Asn Ser Ile Leu Ile Ala Asn Pro Ser Leu His Arg
                245                 250                 255
Glu Ile Leu Asn His His Leu Asn Gln Gln Arg Asp Thr Leu Ile Thr
                260                 265                 270
Leu His Glu Lys Arg Phe Gly Lys Arg
        275                 280
```

<210> 5665
<211> 805
<212> PRT
<213> S.epidermidis

<400> 5665

Val Ala Val Met Ile Ala Lys Val Ile Val Asp Ile Pro Ser Lys Ser
1   5   10   15
Val Asp Phe Lys Phe Asp Tyr Ile Val Pro Lys Asn Leu Glu Arg Val
                20   25   30
Ile Gln Ile Gly Val Arg Val Val Val Pro Phe Gly Pro Arg Thr Ile
        35   40   45
Gln Gly Tyr Val Met Asn Ile Gln Gln Glu Pro Asp Gly Asn Met Asp
    50   55   60
Ile Ser Lys Leu Lys Glu Ile Lys Glu Val Arg Asp Ile Lys Pro Glu
65   70   75   80
Leu Thr Ser Glu Leu Ile Gln Leu Ser Glu Trp Met Ser His Tyr His
            85   90   95
Val Met Lys Arg Ile Ser Val Leu Glu Ala Met Leu Pro Ser Ala Ile
            100   105   110
Lys Ala Lys Tyr Lys Lys Ala Phe Ser Ile Ile Asp Pro Lys Asn Leu
        115   120   125
Ser Ser Lys Thr Lys Ala Leu Phe Asn Asn Asp Gly Tyr Tyr Leu Tyr
    130   135   140
Lys Glu Ala Gln Gln Asn Asn Asp Leu Glu Glu Met Leu Thr Leu Leu
145   150   155   160
Asn Gln Gly Leu Ile Glu Glu Val Thr Ile Leu Ser Gln Asn Thr Lys
            165   170   175
Lys Lys Thr Gln Lys Ala Val Gly Val Val Asn Thr Leu Asn Gly Asp
        180   185   190
Glu Val Leu Ala Lys Leu Glu Lys Tyr Thr Lys Gln Tyr Asp Leu Tyr
    195   200   205
Ala Phe Leu Leu Glu Glu Ser His Arg Thr Val Phe Leu Lys Glu Ile
    210   215   220
Asn Asp Met Gly Phe Ser His Ser Ser Leu Asp Ser Leu Ile Lys Lys
225   230   235   240
Gly Tyr Ile Glu Lys Tyr Thr Ala Glu Val Phe Arg Asp Pro Tyr Ala
            245   250   255
Asn Arg Ile Phe Glu Gln Glu Gln Lys Arg Ile Leu Thr Lys Glu Gln
            260   265   270
Gln Asp Ala Phe Glu Ala Ile Gln His Tyr Ile His Asp Glu Lys Glu
    275   280   285
Arg Thr Phe Leu Leu His Gly Val Thr Gly Ser Gly Lys Thr Glu Val
    290   295   300
Tyr Leu Gln Thr Ile Glu Glu Val Leu Asn Lys Gly Lys Glu Ala Met
305   310   315   320
Met Leu Val Pro Glu Ile Ala Leu Thr Pro Gln Met Val Leu Arg Phe
            325   330   335
Lys Arg Arg Phe Gly Asp Asp Val Ala Val Leu His Ser Gly Leu Ser
            340   345   350
Lys Gly Glu Arg Tyr Asp Glu Trp Gln Lys Ile Arg Asp Gly Arg Ala
    355   360   365
Arg Val Ser Val Gly Ala Arg Ser Ser Ile Phe Ala Pro Phe Lys Asn
    370   375   380
Leu Gly Ile Ile Ile Ile Asp Glu Glu His Glu Ser Thr Tyr Lys Gln
385   390   395   400
Glu Asp Tyr Pro Arg Tyr His Ala Arg Asp Ile Ala Gln Trp Arg Ser
            405   410   415
Gln Phe His His Cys Pro Val Val Leu Gly Ser Ala Thr Pro Ser Leu
            420   425   430
Glu Ser Tyr Ala Arg Ala Glu Lys Asn Val Tyr Glu Leu Leu Ser Leu
            435   440   445

```
Pro His Arg Val Asn Gln Gln Ala Leu Pro His Ile Asp Ile Ile Asp
    450                 455                 460
Met Arg Glu Glu Leu Ser Glu Gly Asn Arg Ser Met Phe Ser Ile Ala
465                 470                 475                 480
Leu Arg Gln Ala Ile Gln Glu Arg Leu Asp Lys Lys Glu Gln Ile Val
                485                 490                 495
Leu Phe Leu Asn Arg Arg Gly Tyr Ala Ser Phe Met Leu Cys Arg Asp
                500                 505                 510
Cys Gly Tyr Val Pro Gln Cys Pro His Cys Asp Ile Ser Leu Thr Tyr
            515                 520                 525
His Lys Thr Thr Asp Gln Leu Lys Cys His Tyr Cys Gly Tyr Gln Glu
    530                 535                 540
Asn Pro Pro Ser Gln Cys Pro Asn Cys Glu Gly Asp His Ile Arg Gln
545                 550                 555                 560
Val Gly Thr Gly Thr Gln Arg Val Glu Glu Leu Leu Gln Gln Glu Phe
                565                 570                 575
Pro His Ala Arg Ile Ile Arg Met Asp Val Asp Thr Thr Ser Arg Lys
                580                 585                 590
Gly Ala His Glu Lys Leu Leu Asn Asp Phe Glu Ala Gly Lys Gly Asp
            595                 600                 605
Ile Leu Leu Gly Thr Gln Met Ile Ala Lys Gly Leu Asp Tyr Pro Asn
    610                 615                 620
Ile Thr Leu Val Gly Val Leu Asn Ala Asp Thr Met Leu Asn Leu Pro
625                 630                 635                 640
Asp Phe Arg Ala Ser Glu Arg Thr Tyr Gln Leu Leu Thr Gln Val Ser
                645                 650                 655
Gly Arg Ala Gly Arg His Glu Lys Glu Gly Gln Val Ile Ile Gln Thr
                660                 665                 670
Tyr Asn Pro Asp His Tyr Ser Ile Lys Asp Val Lys Leu Asn Asp Tyr
            675                 680                 685
Leu Ser Phe Tyr Gln Lys Glu Met Asn Tyr Arg Lys Leu Gly Lys Tyr
    690                 695                 700
Pro Pro Tyr Tyr Phe Leu Ile Asn Phe Thr Ile Ser His Thr Asp Ile
705                 710                 715                 720
Lys Lys Val Met Met Ala Ser Lys His Ile His Gln Ile Leu Val Gln
                725                 730                 735
His Leu Ser Glu Lys Ala Phe Val Leu Gly Pro Ser Pro Ala Ala Leu
            740                 745                 750
Ala Arg Ile Asn Asn Glu Tyr Arg Phe Gln Ile Leu Val Lys Tyr Lys
    755                 760                 765
Ser Glu Pro Gln Leu His Pro Ala Leu Gln Tyr Leu Asp Asp Tyr Tyr
    770                 775                 780
His Asp Gln Tyr Val Lys Asp Lys Leu Ser Leu Lys Ile Asp Ile Asn
785                 790                 795                 800
Pro Gln Met Met Met
                805
```

<210> 5666
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5666
```
Asn Pro Ser Ile Glu Tyr Leu Thr Ile Arg Tyr Pro Ile Glu Gly Phe
1               5               10              15
Phe Asp Trp Met Ile Lys Arg Trp Gln Pro Ile Ser Tyr Ile Glu Leu
```

```
                20                          25                          30
Asn Asp Cys Tyr Thr Pro Leu Tyr Val Gln Leu Pro
        35                          40
```

<210> 5667
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5667
```
Ser Ile Pro Ile His Arg Thr Ile Val Leu His Leu Gln Cys Ile Phe
1                   5                          10                          15
Glu Ile Ile Ile Phe Lys Ser Ile Asn Ser Thr Arg Ile Ile Tyr Asp
                20                          25                          30
Lys Ser Lys Val Ile Ile Ile Thr Gln Asn
        35                          40
```

<210> 5668
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5668
```
Leu Phe Gln Ile Cys Ile Glu Gly Glu Val Gln Leu Tyr Asp Glu Leu
1                   5                          10                          15
Glu Tyr Ser Ser Asp Phe Ser Ser Gln Leu Ile Ser Thr Ile His Ser
                20                          25                          30
Asp Phe Ile Ile Lys Ile Tyr Tyr Asp Phe Glu Val Asn Ser
        35                          40                          45
```

<210> 5669
<211> 74
<212> PRT
<213> S.epidermidis

<400> 5669
```
Ser Phe Lys Ile Ile Ser Ile Ile Ile Ile Glu Lys Leu His Tyr
1                   5                          10                          15
Lys Phe Ile Ile Asn Leu Ser Leu Val Val Thr His Leu Ala Ile Ile
                20                          25                          30
Ala His Ile Phe Ile Ser Tyr Asn Phe Ile Ile Asn Ser Tyr Gly Val
        35                          40                          45
Pro Ser Val Thr Ser Phe Phe Asn Phe Gln Arg Asn Ile Asn Cys Phe
    50                          55                          60
Ile Thr Phe Asn Ile Lys Arg Leu Asn Cys
65                          70
```

<210> 5670
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5670
```
Met Ile Lys Ile Tyr Leu Phe Val Asp Leu Ile Lys His Ile Ala Thr
1                   5                          10                          15
Lys Lys Arg Ser Tyr Leu Leu Tyr Thr Ser Thr Tyr Leu Leu Asn Lys
```

```
              20      .                25                        30
Tyr Lys Gln Ile Asp Leu Pro Leu Lys Pro Met Ile
        35                    40
```

```
<210> 5671
<211> 214
<212> PRT
<213> S.epidermidis
```

```
<400> 5671
Met Val Lys Ile Leu Pro Ser Leu Leu Ser Ile Asp Phe Leu Asn Leu
1               5                   10                  15
Lys Glu Glu Leu Gln Leu Leu Glu Thr Ala Lys Val Asp Gly Leu His
            20                  25                  30
Phe Asp Val Met Asp Gly Lys Phe Val Pro Asn Ile Ser Ile Gly Ile
        35                  40                  45
Pro Ile Leu Asp Ala Val Arg Gln Gln Ser His Leu Pro Ile Asp Val
    50                  55                  60
His Leu Met Ile Glu Gln Pro Glu Asn Tyr Ile Asn Leu Phe Ala Glu
65                  70                  75                  80
His Gly Ala Asp Met Ile Ser Val His Val Glu Ser Thr Thr His Ile
                85                  90                  95
His Arg Ala Ile Glu Gln Ile Lys Gln Leu Gly Lys Lys Ala Gly Val
            100                 105                 110
Val Ile Asn Pro Gly Thr Ser Val Glu Thr Ile Leu Pro Ile Leu Ser
            115                 120                 125
Ile Val Asp Tyr Val Leu Val Met Thr Val Asn Pro Gly Phe Gly Gly
        130                 135                 140
Gln Thr Phe Ile Glu Gln Cys Val Thr Lys Ile Glu Gln Leu Asn Gln
145                 150                 155                 160
Leu Lys His Glu Asn His Leu Thr Phe Asp Ile Glu Val Asp Gly Gly
                165                 170                 175
Ile Asn Asp Gln Thr Ser Lys Arg Cys Val Glu Gln Gly Ala Thr Met
            180                 185                 190
Leu Val Thr Gly Ser Tyr Phe Phe Lys Gln Glu Asp Tyr Ala Lys Val
            195                 200                 205
Thr Ser Leu Leu Lys Glu
        210
```

```
<210> 5672
<211> 210
<212> PRT
<213> S.epidermidis
```

```
<400> 5672
Ser Asn Lys Ile Phe Glu Tyr Leu Leu Met Tyr Leu Cys Leu Ser Tyr
1               5                   10                  15
Leu Ile Tyr Tyr Leu Ile Arg Lys Val Tyr Asp Met Ile Thr Met Lys
            20                  25                  30
Asp Ile Ile Arg Asp Gly His Pro Thr Leu Arg Glu Lys Ala Lys Glu
        35                  40                  45
Leu Ser Phe Pro Leu Ser Asn Asn Asp Lys Glu Thr Leu Arg Ala Met
    50                  55                  60
Arg Glu Phe Leu Ile Asn Ser Gln Asp Glu Glu Thr Ala Lys Arg Tyr
65                  70                  75                  80
Gly Leu Arg Ser Gly Val Gly Leu Ala Ala Pro Gln Ile Asn Glu Pro
```

```
                        85                      90                      95
Lys Arg Met Ile Ala Val Tyr Leu Pro Asp Asp Gly Asn Gly Lys Ser
            100                     105                     110
Tyr Asp Tyr Met Leu Val Asn Pro Lys Ile Met Ser Tyr Ser Val Gln
            115                     120                     125
Glu Ala Tyr Leu Pro Thr Gly Glu Gly Cys Leu Ser Val Asp Glu Asn
            130                     135                     140
Ile Pro Gly Leu Val His Arg His His Arg Val Thr Ile Lys Ala Gln
145                     150                     155                     160
Asp Ile Asp Gly Asn Asp Val Lys Leu Arg Leu Lys Gly Tyr Pro Ala
                        165                     170                     175
Ile Val Phe Gln His Glu Ile Asp His Leu Asn Gly Ile Met Phe Tyr
            180                     185                     190
Asp Tyr Ile Asp Ala Asn Glu Pro Leu Lys Pro His Glu Glu Ala Val
            195                     200                     205
Glu Val
    210
```

<210> 5673
<211> 311
<212> PRT
<213> S.epidermidis

<400> 5673
```
Val Ser Lys Met Gly Lys Ile Ala Val Val Phe Pro Gly Gln Gly Ala
1               5                       10                      15
Gln Lys Val Gly Met Ala Ser Asp Leu Tyr Asn Glu Glu Glu Arg Ser
            20                      25                      30
Thr Arg Val Leu Asn Leu Ala Gln Glu Thr Val Asp Phe Asp Leu Leu
            35                      40                      45
Glu Thr Met Phe Thr Asp Asn Asp Gly Lys Leu Gly Glu Thr Glu Asn
            50                      55                      60
Thr Gln Pro Ala Leu Leu Thr His Ser Val Ala Leu Leu Glu Ser Leu
65                      70                      75                      80
Asn His Leu Lys Val Asp Tyr Thr Met Gly His Ser Leu Gly Glu Tyr
                        85                      90                      95
Ser Ser Leu Val Ser Ser Asp Val Leu Ser Phe Glu Asp Ala Val Arg
            100                     105                     110
Ile Val Arg Lys Arg Gly Gln Leu Met Ala Gln Ala Phe Pro Asn Gly
            115                     120                     125
Val Gly Gly Met Ala Ala Val Leu Gly Leu Asp Tyr Asp Asp Val Asp
            130                     135                     140
Lys Ile Cys Gln Thr Leu Ser Thr Lys Glu Gln Leu Ile Glu Pro Ala
145                     150                     155                     160
Asn Ile Asn Ser Pro Gly Gln Ile Val Val Ser Gly His Lys Ser Leu
                        165                     170                     175
Ile Asp Glu Leu Val Glu Lys Gly Lys Glu Leu Gly Ala Lys Arg Val
            180                     185                     190
Leu Pro Leu Ala Val Ser Gly Pro Phe His Ser Ser Met Met Lys Val
            195                     200                     205
Ile Glu Glu Asp Phe Ala Asn Phe Ile Asn Gln Phe Glu Trp His Asn
            210                     215                     220
Ala Asn Tyr Pro Val Val Gln Asn Val Asn Ala Lys Gly Glu Thr Asp
225                     230                     235                     240
Ala Glu Val Ile Lys Arg Asn Met Val Lys Gln Leu Tyr Ser Pro Val
                        245                     250                     255
```

Gln Phe Ile Gln Ser Thr Glu Trp Leu Ile Asn Gln Gly Val Asp His
            260   265   270
Phe Ile Glu Ile Gly Pro Gly Lys Val Leu Ser Gly Leu Ile Lys Lys
            275   280   285
Ile Asn Arg Asp Val Lys Ile Thr Ser Ile Gln Thr Leu Glu Asp Val
            290   295   300
Lys Gly Trp Asn Asn His Glu
305   310

<210> 5674
<211> 382
<212> PRT
<213> S.epidermidis

<400> 5674
Lys Gly Glu Met Gln Met Lys Ser Val Gly Leu Ile Thr Glu Tyr Asn
1   5   10   15
Pro Phe His Asn Gly His Leu Phe His Ala Thr Leu Ser Lys Gln Arg
            20   25   30
Ser Glu Thr Asn Val Thr Ile Ala Ile Met Ser Gly Asn Phe Val Met
            35   40   45
Arg Gly Glu Pro Ala Ile Tyr His Lys Phe Lys Arg Thr Lys Met Ala
        50   55   60
Leu Ser Ala Val Asp Leu Val Val Glu Leu Pro Leu Ile Gly Ser Leu
65   70   75   80
Ser Ser Ser Asp Thr Phe Ala Glu Ile Ala Ile Lys Thr Ala Gln Tyr
                85   90   95
Leu Asp Ile Asp Ile Ile Ser Phe Gly Ser Glu Ser Ala Ser Leu Lys
            100   105   110
Asp Leu Gln Tyr Leu Ala Thr Gln Met Ile Asp Tyr Glu Lys His Pro
            115   120   125
Asp Phe Lys Glu Lys Leu Lys Gln Gly Lys Ser Tyr Pro Arg Ile Leu
            130   135   140
Ser Glu Leu Thr His Asn Asp Thr Leu Leu Gln Ser Pro Asn Asn Ile
145   150   155   160
Leu Gly Ile Ser Tyr Leu Lys Ala Met Gln Gln Phe Ala Pro His Met
                165   170   175
Ser Ala Leu Thr Ile Lys Arg Glu Gly Ser Leu His His Gln Lys Val
            180   185   190
Ile Asp His His His Phe Ala Ser Gly Thr Ser Ile Arg Arg Ser Leu
            195   200   205
Met Asn Asp Asn Val Asp Trp Lys Asn Val Val Pro Asn Gln Ile Gln
            210   215   220
Ser Leu Tyr Cys Lys Pro His Thr Thr Val Glu Asp Thr Phe Pro Phe
225   230   235   240
Ile Lys His Gln Leu Ile Thr Gln Pro Lys Glu Ser Leu His Ser Ile
                245   250   255
Tyr Thr Ile Asn Glu Gly Phe Glu Asn Arg Leu Gln Thr Met Ile His
            260   265   270
Arg Ser Asp Ser Phe Glu Ser Leu Leu Ser Asn Leu Lys Thr Lys Arg
            275   280   285
Tyr Thr Gln Thr Tyr Ile Gln Arg Val Leu Met Asn Val Leu Leu Asn
            290   295   300
Ile Thr Lys Asp Asp Val Asn Lys Glu Ile Asn Ala Val Arg Val Leu
305   310   315   320
Gly Met Ser Glu Lys Gly Arg Ser Tyr Leu Lys Tyr Leu Lys Ala Asn

```
                  325                    330                    335
Tyr Pro Asn Arg His Tyr Ile Thr Asn Val Asn Gln Lys Thr Ala His
              340                    345                    350
Tyr Phe Lys Asn Glu Ile Lys Ala Thr His Val Tyr Asn Leu Leu Ser
              355                    360                    365
Asn Gln Ser Gln Thr Asp Phe Asn Thr Pro Leu Val Arg Ile
              370                    375                    380
```

<210> 5675
<211> 249
<212> PRT
<213> S.epidermidis

<400> 5675
```
Lys Asp Gly Ile Ile Met Asn Lys Ser Ala Leu Val Thr Gly Ala Ser
1               5                   10                  15
Arg Gly Ile Gly Arg Ser Ile Ala Leu Gln Leu Ala Glu Glu Gly Tyr
              20                  25                  30
Asn Val Ala Val Asn Tyr Ala Gly Ser Lys Asp Lys Ala Glu Ala Val
              35                  40                  45
Val Glu Glu Ile Lys Ala Lys Gly Val Glu Ser Phe Ala Ile Gln Ala
          50                  55                  60
Asn Val Ala Lys Gly Asp Glu Val Lys Glu Met Ile Lys Glu Val Val
65                  70                  75                  80
Ser Gln Phe Gly Ser Val Asp Val Leu Val Asn Asn Ala Gly Ile Thr
              85                  90                  95
Lys Asp Asn Leu Leu Met Arg Met Lys Glu Gln Glu Trp Asp Asp Val
              100                 105                 110
Ile Asp Thr Asn Leu Lys Gly Val Phe Asn Cys Ile Gln Lys Val Thr
              115                 120                 125
Pro Gln Met Leu Arg Gln Arg Ser Gly Ala Ile Ile Asn Leu Thr Ser
              130                 135                 140
Ile Val Gly Ala Met Gly Asn Pro Gly Gln Ala Asn Tyr Val Ala Thr
145                 150                 155                 160
Lys Ala Gly Val Ile Gly Leu Thr Lys Thr Ala Ala Arg Glu Leu Ala
              165                 170                 175
Ser Arg Gly Ile Thr Val Asn Ala Val Ala Pro Gly Phe Ile Val Ser
              180                 185                 190
Asp Met Thr Asn Ala Leu Ser Asp Asp Leu Lys Asp Gln Met Leu Glu
              195                 200                 205
Gln Ile Pro Leu Lys Arg Phe Gly Glu Asp Thr Asp Ile Ala Asn Thr
              210                 215                 220
Val Ala Phe Leu Ala Ser Asp Lys Ala Lys Tyr Ile Thr Gly Gln Thr
225                 230                 235                 240
Ile His Val Asn Gly Gly Met Tyr Met
              245
```

<210> 5676
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5676
```
Tyr Ser Leu Ile Leu Asn Leu Ile Asp Ser Ser Ile Lys Ile Gly Gly
1               5                   10                  15
Val Val Met Leu Ile His Tyr Gly Val Pro Leu Leu Ile Phe Ala Leu
```

```
                20                      25                      30
     Val Leu Leu Ile Gly Trp Leu Met Thr Lys Met Phe Ile Arg
             35                      40                      45
```

<210> 5677
<211> 76
<212> PRT
<213> S.epidermidis

<400> 5677
```
Asn Gly Leu Ile Glu Asn Gln Met Glu Phe Tyr Asn His Leu Val Tyr
1               5                       10                      15
Lys Glu Thr His Tyr Asn Val Leu Leu Lys Cys Lys Asp Asp Tyr Tyr
            20                      25                      30
His Tyr Phe Val Pro Leu Asp Ala Ser Ser Pro Phe Ile Tyr Tyr Asp
            35                      40                      45
Lys Leu Ser Arg Gln Ser Thr Asn Val Trp Ile Ser Phe Lys Glu Ile
        50                      55                      60
Leu Pro Ser Ser Phe Ala Thr Ser Ile Ser Ser Leu
65                      70                      75
```

<210> 5678
<211> 340
<212> PRT
<213> S.epidermidis

<400> 5678
```
Asn Lys Met Ile Tyr Ala Tyr Ile Gly Ile Thr Val Leu Trp Val Phe
1               5                       10                      15
Leu Phe Cys Tyr Ile Ile Ile Ala Ser Ile Asp Phe Gly Ala Gly Phe
            20                      25                      30
Phe Ala Leu His Ser Lys Met Thr Gly Asn Glu Lys Lys Val Asn His
            35                      40                      45
Leu Ile His Arg Tyr Leu Asn Pro Val Trp Glu Val Thr Asn Val Phe
        50                      55                      60
Phe Val Phe Phe Phe Val Gly Phe Ile Gly Phe Phe Pro Asp Ser Ala
65                      70                      75                      80
Lys Tyr Leu Gly Thr Val Leu Leu Val Pro Gly Ser Ile Ala Leu Ile
                85                      90                      95
Leu Ile Ser Ile Arg Ser Ser Phe Tyr Ala Phe Glu Asn Tyr Gly Gln
            100                     105                     110
Asp Thr Lys Leu Pro Trp Ile Val Leu Tyr Gly Leu Thr Gly Leu Leu
            115                     120                     125
Ile Pro Ala Ser Leu Ala Thr Ala Leu Thr Ile Ser Glu Gly Gly Tyr
        130                     135                     140
Ile Tyr Glu His Gly Thr His Ile Asp Leu Asp Trp Ile Gln Leu Leu
145                     150                     155                     160
Leu Ser Pro Phe Ala Trp Ser Val Val Phe Leu Ala Ile Val Ser Val
                165                     170                     175
Leu Tyr Ile Ser Ser Gly Phe Leu Thr Tyr Tyr Ala His Lys Ala Asn
            180                     185                     190
Asp Gln Pro Ala Tyr Asp Met Thr Arg Gln Trp His Ile Phe Trp Gly
            195                     200                     205
Pro Pro Met Ile Val Ile Ser Leu Phe Val Phe Leu Ser Leu Arg Ile
        210                     215                     220
Gln Asn Ser Asp His Phe Arg Thr Ala Ile Phe Asn Tyr Trp Trp Met
```

```
225                    230                    235                    240
Phe Ala Ile Ser Phe Ile Phe Phe Ile Ile Ala Gly Leu Leu Thr Ile
                245                    250                    255
Phe Lys Lys Lys His Gly Leu Ala Phe Ile Met Val Ile Leu Gln Met
                260                    265                    270
Leu Phe Ala Phe Phe Gly Tyr Gly Met Ser Lys Leu Pro Tyr Leu Leu
                275                    280                    285
Tyr Pro Phe Ile Lys Ile Thr Asp Ser His Val Asn Pro Glu Met Gly
    290                    295                    300
Leu Ser Leu Val Ile Val Phe Val Leu Gly Leu Leu Leu Ile Pro
305                    310                    315                    320
Ser Leu Ile Leu Leu Leu Arg Leu Phe Val Phe Asp Lys Ala Tyr Val
                325                    330                    335
Glu Gly Lys Lys
                340
```

<210> 5679
<211> 312
<212> PRT
<213> S.epidermidis

<400> 5679
```
Glu Asp Ser Ile Met Ala His Ser Lys Lys Trp Phe Ile Asn Gly Thr
·1                  5                    10                    15
Leu Ala Thr Ala Gly Ile Ile Ser Ser Leu Phe Tyr Phe Leu Lys Asn
                20                    25                    30
Lys Asn Lys Ser Pro Gln Gln Leu Lys Ser Ile Pro Pro Phe Phe Ser
                35                    40                    45
Gly Gln Ala Pro Tyr Ile Phe Ala His Arg Gly Gly Met Ala Met Arg
    50                    55                    60
Pro Glu Gln Thr Gln Leu Ala Phe Asp Asn Ala Val Glu Tyr Gly Leu
65                    70                    75                    80
Asp Gly Phe Glu Thr Asp Val Arg Leu Thr Lys Asp Glu Gln Leu Ile
                85                    90                    95
Val Phe His Asp Ala Leu Val Asp Arg Thr Thr Asn Gly Ser Gly Lys
                100                   105                   110
Val Ser Glu His Thr Leu Ala Glu Leu Lys Arg Leu Asp Ala Gly Tyr
    115                   120                   125
His Phe Thr Asp Ile Asn Asn Gln Thr Pro Tyr Arg Gly His Asp Lys
    130                   135                   140
Ala Lys Ile Leu Ser Phe Glu Glu Leu Leu Glu Leu Tyr Pro Asn Met
145                   150                   155                   160
Tyr Ile Asn Val Asp Leu Lys Asp Ala Pro Asp Thr Tyr Glu Gly Arg
                165                   170                   175
Ile Ala Pro Lys Val Ile Tyr Asp Asn Ile Ile Lys His Gly Ala Gln
                180                   185                   190
His Arg Val Leu Val Thr Ser Phe His Lys Lys Gln Ile Gln Arg Phe
    195                   200                   205
Thr Glu Tyr Asn Gln Ala Asp Ile Ala Ile Gly Ala Ser Glu Gly Glu
    210                   215                   220
Val Ala Glu Gly Phe Ile Lys Phe Asn Gly Met Leu Gly His Thr Phe
225                   230                   235                   240
Lys Pro Gln Ala Asp Thr Phe Gln Met Pro Val Ala Tyr Lys Gly Ile
                245                   250                   255
Ser Leu Thr Ser Lys Arg Phe Ile Gln Trp Leu Asn Leu Asn Asn Ile
                260                   265                   270
```

```
Val Pro Gly Tyr Tyr Gly Val Asn Ser Ile Asp Leu Met Thr Asp Leu
        275                 280                 285
Tyr His Lys Gly Val His Thr Leu Val Thr Asp Arg Pro Asp Leu Gly
        290                 295                 300
Gln Gln Phe Lys Glu Thr Leu Lys
305                 310
```

<210> 5680
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5680
```
Tyr Ile Ser Met Val Ile Tyr Ser Phe Tyr Val Glu Lys Phe Leu Lys
1               5                   10                  15
His Tyr Asp Tyr Asn Thr Val Asn Asn Lys Ser Tyr Asp Lys Thr Arg
                20                  25                  30
Ser Lys Ser Ser Tyr Phe Ala Ser Leu Cys
        35                  40
```

<210> 5681
<211> 235
<212> PRT
<213> S.epidermidis

<400> 5681
```
Lys Glu Lys Met Ser Val Arg Asn Leu Pro Ile Ile Ala Leu Asp Phe
1               5                   10                  15
Lys Ser Ala Asp Glu Val His Thr Phe Leu Asn Lys Phe Asn Glu Pro
                20                  25                  30
Leu Cys Val Lys Ile Gly Met Glu Leu Phe Tyr Gln Thr Gly Pro Ala
        35                  40                  45
Leu Ile Lys Ser Ile Lys Lys Arg Gly His Asp Ile Phe Leu Asp Leu
        50                  55                  60
Lys Leu His Asp Ile Pro Asn Thr Val Ser Lys Ala Met Glu Gly Leu
65                  70                  75                  80
Ala Arg Leu Asp Val Asp Leu Val Asn Val His Ala Ala Gly Gly Ile
                85                  90                  95
Lys Met Met Glu Glu Ala Lys Lys Gly Leu Arg Lys His Asn Ala Asp
            100                 105                 110
Ile Lys Ile Ile Ala Val Thr Gln Leu Thr Ser Thr Thr Glu Arg Gln
        115                 120                 125
Leu His Glu Glu Gln Asn Ile Gln Thr Ser Ile Glu Glu Ala Val Leu
        130                 135                 140
Asn Tyr Ala Arg Leu Thr Lys Lys Ala Gly Leu Asp Gly Val Val Cys
145                 150                 155                 160
Ser Pro Leu Glu Ala Glu Met Ile Ser Lys Glu Leu Gly Thr Asp Phe
                165                 170                 175
Leu Lys Val Thr Pro Gly Ile Arg Pro Lys Gly Ala Ala Arg Asn Asp
                180                 185                 190
Gln Gln Arg Ile Thr Thr Pro Glu Glu Ala Lys Thr Leu Gly Ser Thr
            195                 200                 205
His Ile Val Val Gly Arg Pro Ile Thr Gln Ser Glu His Pro Ile Asp
        210                 215                 220
Ser Tyr His Lys Ile Lys Glu Ser Trp Leu Ser
225                 230                 235
```

<210> 5682
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5682
Lys Asn Asp Phe Lys Leu Met Tyr Ile Phe Leu Leu Leu Thr Tyr Tyr
1   5   10   15
Ile Lys Asn His Ile Phe Lys Cys Val Thr Lys Leu Thr Ile Ser Asn
            20   25   30
Val Val Lys Val Ser Gln Phe Asn Phe Ile Lys Pro Asn Leu Phe Val
            35   40   45

<210> 5683
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5683
Asp Gly Thr Val Ser Ile Leu Ser Leu Leu Ala Asn Ile Ile Ile Ala
1   5   10   15
Met Ile Lys Asn Lys Ile Gly Met Ile Arg Val Thr Ile Asn Asn Thr
            20   25   30
Ser Gly Ile Val Thr Ile Ala Ala Ile Lys Lys Arg Lys Pro Asp Lys
            35   40   45
Ile Leu Ile Phe Ile Glu Ile Asn Ala Lys Asn Glu Met Ser Lys Gln
        50   55   60
Thr Ile Lys
65

<210> 5684
<211> 163
<212> PRT
<213> S.epidermidis

<400> 5684
Val Met Thr Val Lys Lys Leu Val Lys Ser Thr His Pro Ile Leu Asn
1   5   10   15
Lys Thr Ile Gln Pro Val Ser Thr Tyr Asp Gln Lys Leu Lys Val Leu
            20   25   30
Leu Glu Asp Leu Glu Asp Thr Leu Tyr His Glu Glu Ala Ala Ala Ile
            35   40   45
Ser Ala Pro Gln Ile Gly Val Asp Gln Ser Val Ala Leu Ile Asp Met
        50   55   60
Glu Gln Glu Gly Leu Leu Gln Leu Ile Asn Pro Val Val Lys Ser Gln
65   70   75   80
Ser Gln Glu Thr Val Ser Asp Leu Glu Gly Ser Ile Ser Leu Pro His
                85   90   95
Ile Tyr Gly Glu Val Lys Arg Ser Lys Met Ile Thr Val Gln Ser Tyr
                100   105   110
Asp Ile Asn Gly Asn Ala Val Glu Leu Thr Ala Tyr Asp Asp Ile Ala
            115   120   125
Arg Met Ile Leu His Met Ile Asp His Leu Asn Gly Ile Gln Phe Thr
        130   135   140
Lys Arg Ala His His Ile Leu Asn Glu Thr Glu Val Glu Ala Tyr Phe

```
145                150                155                160
Asp Asn Glu


<210> 5685
<211> 95
<212> PRT
<213> S.epidermidis

<400> 5685
Gly Glu Tyr Val Met Ser Asn Gln Ser Lys Leu Asn Ser Ala Ala Tyr
1               5                   10                  15
Asp Gln Leu Asn Lys Asp Ala Asp Arg Ile Leu His Leu Ile Lys Val
            20                  25                  30
Gln Met Asp Asn Leu Thr Leu Pro Ser Cys Pro Leu Tyr Glu Glu Val
        35                  40                  45
Leu Asp Thr Gln Met Phe Gly Leu Gln Lys Glu Val Asp Phe Ala Val
        50                  55                  60
Gln Leu Gly Leu Val Asp Lys Glu Asp Gly Lys Gln Leu Met Leu Arg
65                  70                  75                  80
Leu Glu Lys Glu Leu Ser Lys Leu His Glu Ala Phe Thr Asn Val
                85                  90                  95


<210> 5686
<211> 223
<212> PRT
<213> S.epidermidis

<400> 5686
Phe Met Asp Val Lys Glu Asn Leu Ala Lys Ile Glu Lys Glu Ile Asp
1               5                   10                  15
Ala Ser Ile Lys Lys Ser Ala His Ser Ala Gln Pro His Val Ile Ala
            20                  25                  30
Val Thr Lys Tyr Val Thr Ile Glu Arg Ala Arg Glu Ala Tyr Lys Val
        35                  40                  45
Gly Ile Arg His Phe Gly Glu Asn Arg Leu Asp Gly Phe Lys Glu Lys
        50                  55                  60
Lys Glu Ser Leu Pro Ser Asp Val Lys Leu His Phe Ile Gly Ser Leu
65                  70                  75                  80
Gln Ser Arg Lys Val Lys Asp Ile Ile Asn Glu Val Asp Tyr Phe His
                85                  90                  95
Ala Leu Asp Arg Leu Ser Leu Ala Lys Glu Ile Asn Lys Arg Ala Asn
            100                 105                 110
His Val Ile Lys Cys Phe Leu Gln Val Asn Val Ser Gly Glu Glu Ser
            115                 120                 125
Lys His Gly Ile Ala Leu Glu Glu Val Asn Gln Phe Ile Asn Gln Ile
        130                 135                 140
Lys Glu Tyr Glu Asn Ile Gln Ile Ile Gly Leu Met Thr Met Ala Pro
145                 150                 155                 160
Leu Thr Asp Asp Leu Ser Tyr Ile Arg Asn Leu Phe Lys Glu Leu Arg
                165                 170                 175
His Lys Arg Asn Glu Ile Gln Gln Phe Asn Leu Ala His Ala Pro Cys
            180                 185                 190
Thr Glu Leu Ser Met Gly Met Ser Asn Asp Tyr Gln Met Ala Val Glu
            195                 200                 205
Glu Gly Ala Thr Phe Val Arg Ile Gly Thr Lys Leu Val Gly Glu
```

<210> 5687
<211> 467
<212> PRT
<213> S.epidermidis

<400> 5687   .
Leu Leu Arg Val Lys Asn Leu Arg Leu Lys Tyr Pro Asn Gly Asp Arg
1   5   10   15
Lys Ile Phe Asn Asn Leu Asn Leu Glu Ile Lys Asn Lys Glu Lys Val
            20   25   30
Leu Leu Leu Gly Pro Ser Gly Ser Gly Lys Ser Thr Leu Leu Asn Val
        35   40   45
Leu Ser Gly Ile Val Pro Asn Leu Ile Glu Leu Pro Met Lys Tyr Asp
    50   55   60
Glu Leu Asn Ile Asp His Asp Ser Gly Val Ile Phe Gln Asp Pro Asp
65   70   75   80
Asn Gln Phe Cys Met Pro Lys Val Tyr Glu Glu Leu Ala Phe Val Leu
                85   90   95
Glu Asn Arg Asn Ile Pro Arg Ser Glu Met Asp Gln Glu Ile Glu Asp
            100   105   110   .
Ala Leu Lys Ser Val Asp Leu Asn Val Thr His Lys Thr Tyr Val Asn
        115   120   125
Asn Leu Ser Gly Gly Met Lys Gln Lys Leu Ala Ile Val Glu Thr Ile
    130   135   140
Leu Gln Lys Ser Lys Thr Leu Phe Leu Asp Glu Pro Thr Ala Met Leu
145   150   155   160
Asp Val Lys Ala Thr Glu Asp Leu Trp Lys Lys Leu Ile Asn Leu Trp
                165   170   175
Glu Asp Gln Thr Val Leu Ile Val Glu His Lys Val Glu His Ile Trp
                180   185   190
Gln His Val Asp Arg Val Leu Leu Leu Asn Tyr Asp Gly Glu Ile Val
            195   200   205
Ala Asp Asp Thr Pro Glu Gln Ile Leu Asp His Tyr Glu Ala Leu Leu
    210   215   220
Thr Glu Tyr Gly Val Trp His Pro Arg Ala Trp His Ser Ala Pro Arg
225   230   235   240
Pro Ile Pro Leu Pro Asn Gln Thr Lys Asn Leu Leu Phe His Phe Asp
                245   250   255
Asp Gly Gln Ile Ile Arg Gly Lys Lys Thr Leu Phe Ser Ser Lys Glu
            260   265   270
Leu Lys Leu Tyr Ser Gly Glu Trp Leu Thr Ile Thr Gly Lys Asn Gly
        275   280   285
Ala Gly Lys Thr Ser Leu Leu Glu Ala Met Leu Gln Leu Ile Lys Tyr
    290   295   .   300
Glu Gly Asp Met Phe Tyr Arg Asp Gln Leu Leu Ser Lys Ile Lys Gln
305   310   315   320
Ala Ala Lys His Met Tyr Leu Val Tyr Gln Asn Pro Glu Leu Gln Phe
                325   330   335
Ile Thr Asn Ser Val Tyr Asp Glu Val Tyr Ile His Tyr Asn His Leu
            340   345   350
Asp Pro Lys His Ala Asn Asp Glu Thr Met Asp Leu Leu Lys Leu Leu
        355   360   365
His Leu Asp Gln Val Lys Asp His His Pro Phe Glu Ile Ser Thr Gly
    370   375   380

Gln Lys Arg Arg Leu Ser Val Ala Thr Ala Leu Ser Ser Lys Ala Glu
385   390   395   400
Ile Ile Leu Leu Asp Glu Pro Thr Phe Gly Leu Asp Ser His Asn Thr
            405   410   415
Phe Gln Leu Ile Lys Leu Phe Gln Glu Arg Val Asn Gln Gly Gln Thr
            420   425   430
Ile Ile Met Val Thr His Asp Pro Glu Ile Ile Lys Arg Tyr Pro Thr
        435   440   445
Arg Arg Leu Arg Val Glu Asp Gly Cys Leu Lys Glu Met Glu Gly Glu
    450   455   460
His Ile Val
465

<210> 5688
<211> 137
<212> PRT
<213> S.epidermidis

<400> 5688
Gly Val Ser Val Met Ala Val Glu Lys Ile Tyr Gln Pro Tyr Asp Glu
1   5   10   15
Ala Thr Gln Thr Ser Ile Pro Gln Arg Gln Pro Gln Ser Ser Pro Glu
            20   25   30
Lys Gln Thr Val Lys Arg Lys Val Val Val Gln Leu Thr Arg Phe Glu
            35   40   45
Lys Ile Leu Tyr Ile Ala Leu Ile Thr Val Ile Ala Leu Ile Ser Ile
        50   55   60
Tyr Met Leu Ser Leu Lys Met Asp Ala Tyr Asp Thr Arg Gly Lys Ile
65   70   75   80
Ala Asp Leu Asp Gln Lys Ile Glu Lys Gln Ser Ser Glu Asn Ser Ala
            85   90   95
Leu Lys Ser Glu Ile Lys Lys Asn Ser Ser Tyr Glu Arg Ile Tyr Asp
            100   105   110
Lys Ala Lys Lys Gln Gly Met Ser Leu Glu Asn Asp Asn Val Lys Val
        115   120   125
Val Arg Asn Asn Gly Glu Ala Lys Asn
    130   135

<210> 5689
<211> 296
<212> PRT
<213> S.epidermidis

<400> 5689
Met Arg Gly Val Phe Leu Lys Thr Gly Arg Ile Val Lys Leu Ile Ser
1   5   10   15
Gly Val Tyr Gln Val Asp Val Glu Gly Glu Arg Phe Asp Thr Lys Pro
            20   25   30
Arg Gly Leu Phe Arg Lys Lys Lys Phe Ser Pro Val Val Gly Asp Ile
        35   40   45
Val Asp Phe Glu Val Gln Asn Thr Lys Glu Gly Tyr Ile His His Val
    50   55   60
His Asp Arg Asn Asn Glu Leu Lys Arg Pro Pro Val Ser Asn Ile Asp
65   70   75   80
Glu Leu Val Ile Val Met Ser Ala Val Glu Pro Glu Ile Ser Thr Gln
            85   90   95

Leu Leu Asp Arg Tyr Leu Val Ile Ala His Ser Tyr His Leu Lys Pro
              100   105   110
Arg Ile Leu Ile Thr Lys His Asp Leu Ala Ser Glu Gln Glu Ile Leu
              115   120   125
Lys Ile Lys Asp Thr Ile Lys Ile Tyr Gln Lys Ile Gly Tyr Ala Thr
              130   135   140
Gln Phe Ile Gly Lys Asp Ser Asn Tyr Thr Ala Thr Val Asp Glu Trp
145   150   155   160
Ser Asp Gly Leu Ile Val Leu Ser Gly Gln Ser Gly Val Gly Lys Ser
                        165   170   175
Thr Phe Leu Asn Ser Tyr Gln Pro Gln Leu Lys Leu Glu Thr Asn Asp
              180   185   190
Ile Ser Lys Ser Leu Asn Arg Gly Lys His Thr Thr Arg His Val Glu
              195   200   205
Leu Tyr Asp Arg Lys Gly Gly Tyr Ile Ala Asp Thr Pro Gly Phe Ser
              210   215   220
Ala Leu Asp Phe Asn His Ile Glu Lys Glu Gln Leu Lys Asp Phe Phe
225   230   235   240
Ile Asp Ile His Glu Ala Gly Glu Gln Cys Lys Phe Arg Asn Cys Asn
                        245   250   255
His Ile Lys Glu Pro Gln Cys His Val Lys Ala Leu Val Glu Lys Gly
                        260   265   270
Glu Ile Pro Gln Phe Arg Tyr Asp His Tyr Gln Gln Leu Tyr Asn Glu
              275   280   285
Ile Ser Asn Arg Lys Val Arg Tyr
              290   295

<210> 5690
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5690
Asn Lys Cys Leu Tyr Ile Phe Leu Ala Lys Met Ile Met Thr Phe Leu
1   5   10   15
Phe Asn His Thr Thr Thr Leu Lys Arg Leu Lys Asp Phe Lys Tyr Phe
              20   25   30
Asn Cys Asn Leu Ile Ile Leu Trp Leu Ser Val Thr His Pro Val Thr
              35   40   45
Phe Lys Asn Tyr Asn Ala Thr Asn Ile Met Ile Phe Ile Met Ser Thr
              50   55   60
Asn Thr Asn Thr Cys Ser Arg Thr Leu
65   70

<210> 5691
<211> 927
<212> PRT
<213> S.epidermidis

<400> 5691
Ser Ser Phe Leu Ser Leu Gln Gly Val Asn Leu Met Asn Tyr Lys Asp
1   5   10   15
Thr Leu Leu Met Pro Lys Thr Asp Phe Pro Met Arg Gly Gly Leu Pro
              20   25   30
Asn Lys Glu Pro Gln Ile Gln Glu Met Trp Asp Asn Asp Glu Gln Tyr
              35   40   45

```
Arg Lys Ala Leu Glu Lys Asn Lys Asn Asn Pro Ser Phe Ile Leu His
    50                  55                  60
Asp Gly Pro Pro Tyr Ala Asn Gly Asn Leu His Met Gly His Ala Leu
65                  70                  75                  80
Asn Lys Ile Ile Lys Asp Phe Ile Val Arg Tyr Lys Thr Met Gln Gly
                85                  90                  95
Phe Tyr Ala Pro Tyr Val Pro Gly Trp Asp Thr His Gly Leu Pro Ile
                100                 105                 110
Glu Gln Ala Leu Thr Lys Lys Gly Val Asp Arg Lys Lys Met Ser Val
        115                 120                 125
Ala Glu Phe Arg Glu Lys Cys Lys Glu Phe Ala Leu Lys Gln Ile Asp
        130                 135                 140
Ile Gln Lys Lys Asp Phe Lys Arg Leu Gly Val Arg Gly Asp Phe Asn
145                 150                 155                 160
Asn Pro Tyr Ile Thr Leu Thr Pro Glu Tyr Glu Ala Ala Gln Ile Arg
                165                 170                 175
Leu Phe Gly Glu Met Ala Asp Lys Gly Leu Ile Tyr Lys Gly Lys Lys
                180                 185                 190
Pro Val Tyr Trp Ser Pro Ser Ser Glu Ser Ser Leu Ala Glu Ala Glu
                195                 200                 205
Ile Glu Tyr His Asp Lys Arg Ser Ala Ser Ile Tyr Val Ala Phe Asp
        210                 215                 220
Val Lys Asp Ser Lys Gly Lys Val Asp Ser Asp Ala Gln Phe Ile Ile
225                 230                 235                 240
Trp Thr Thr Thr Pro Trp Thr Ile Pro Ser Asn Val Ala Ile Thr Val
                245                 250                 255
His Pro Glu Leu Lys Tyr Gly Gln Tyr Asn Val Asp Gly His Lys Tyr
                260                 265                 270
Ile Val Ala Gln Ala Leu Ser Glu Glu Val Ala Glu Ala Leu Gly Trp
        275                 280                 285
Asp Lys Asp Ser Ile Gln Leu Glu Lys Glu Phe Thr Gly Lys Glu Leu
        290                 295                 300
Glu Phe Ile Glu Ala Gln His Pro Phe Leu Asp Arg Val Ser Leu Val
305                 310                 315                 320
Ile Asn Gly Glu His Val Thr Thr Asp Ala Gly Thr Gly Cys Val His
                325                 330                 335
Thr Ala Pro Gly His Gly Glu Asp Asp Tyr Ile Val Gly Gln Lys Tyr
                340                 345                 350
Asp Leu Pro Val Ile Ser Pro Leu Asn Asp Lys Gly Val Phe Thr Glu
        355                 360                 365
Glu Gly Gly Pro Phe Glu Gly Met Phe Tyr Asp Lys Ala Asn Lys Ala
        370                 375                 380
Val Thr Asp Leu Leu Lys Glu Lys Asp Ala Leu Leu Lys Leu Asp Phe
385                 390                 395                 400
Ile Thr His Ser Tyr Pro His Asp Trp Arg Thr Lys Lys Pro Val Ile
                405                 410                 415
Phe Arg Ala Thr Pro Gln Trp Phe Ala Ser Ile Asn Lys Val Arg Gln
                420                 425                 430
Asp Ile Leu Asp Ala Ile Glu Asp Thr Asn Phe Lys Val Asp Trp Gly
        435                 440                 445
Lys Thr Arg Ile Tyr Asn Met Ile Arg Asp Arg Gly Glu Trp Val Ile
        450                 455                 460
Ser Arg Gln Arg Val Trp Gly Val Pro Leu Pro Val Phe Tyr Ala Glu
465                 470                 475                 480
Asn Gly Asp Ile Ile Met Thr Lys Glu Thr Val Asn His Val Ala Asp
                485                 490                 495
```

```
Leu Phe Glu Lys Tyr Gly Ser Asn Ile Trp Phe Glu Lys Glu Ala Lys
        500                 505                 510
Glu Leu Leu Pro Glu Gly Phe Ser His Pro Gly Ser Pro Asn Gly Glu
        515                 520                 525
Phe Thr Lys Glu Thr Asp Ile Met Asp Val Trp Phe Asp Ser Gly Ser
        530                 535                 540
Ser His Arg Gly Val Leu Glu Thr Arg Pro Glu Leu Ser Phe Pro Ala
545                 550                 555                 560
Asp Leu Tyr Phe Glu Gly Ser Asp Gln Tyr Arg Gly Trp Phe Asn Ser
                565                 570                 575
Ser Ile Thr Thr Ala Val Ala Thr Arg Gly Gln Ala Pro Tyr Lys Phe
            580                 585                 590
Leu Leu Ser His Gly Phe Phe Met Asp Gly Glu Gly Lys Lys Met Ser
            595                 600                 605
Lys Ser Leu Gly Asn Val Ile Val Pro Asp Gln Val Val Lys Gln Lys
        610                 615                 620
Gly Ala Asp Ile Ala Arg Leu Trp Val Ser Ser Thr Asp Tyr Leu Ser
625                 630                 635                 640
Asp Val Arg Ile Ser Asp Glu Ile Leu Lys Gln Thr Ser Asp Val Tyr
                645                 650                 655
Arg Lys Ile Arg Asn Thr Leu Arg Phe Met Leu Gly Asn Ile Asn Asp
                660                 665                 670
Phe Asn Pro Glu Thr Asp Ser Ile Ala Glu Thr Asn Leu Leu Glu Val
            675                 680                 685
Asp Arg Tyr Leu Leu Asn Arg Leu Arg Glu Phe Thr Ala Ser Thr Ile
        690                 695                 700
Asn Asn Tyr Glu Asn Phe Asp Tyr Leu Asn Ile Tyr Gln Glu Val Gln
705                 710                 715                 720
Asn Phe Ile Asn Val Glu Leu Ser Asn Phe Tyr Leu Asp Tyr Gly Lys
                725                 730                 735
Asp Ile Leu Tyr Ile Glu Lys Lys Asp Ser His Lys Arg Arg Ser Met
                740                 745                 750
Gln Thr Val Leu Tyr Gln Ile Leu Ile Asp Met Thr Lys Leu Leu Ala
            755                 760                 765
Pro Ile Leu Val His Thr Ala Glu Glu Val Trp Ser His Thr Pro His
        770                 775                 780
Val Lys Glu Glu Ser Val His Leu Ser Asp Met Pro Lys Val Val Asp
785                 790                 795                 800
Val Asp Glu Glu Leu Leu Glu Lys Trp Asn Thr Phe Met Asn Leu Arg
                805                 810                 815
Asp Asp Val Asn Arg Ala Leu Glu Gln Ala Arg Asn Glu Lys Val Ile
            820                 825                 830
Gly Lys Ser Leu Glu Ala Lys Val Val Ile Gly Asn Asn Glu Thr Phe
        835                 840                 845
Asn Thr Ala Glu Phe Leu Gln Gln Phe Asn Asp Leu Gln Gln Leu Phe
        850                 855                 860
Ile Val Ser Gln Val Glu Val Lys Asp Lys Val Asn Asp Gly Val Ser
865                 870                 875                 880
Tyr Gln Tyr Gly Asp Ile His Ile Lys His Ala Glu Gly Glu Lys Cys
                885                 890                 895
Glu Arg Cys Trp Asn Tyr Thr Glu Glu Leu Gly Ser Val Gly Glu Leu
            900                 905                 910
Glu His Leu Cys Pro Arg Cys Gln Glu Val Val Lys Thr Leu Val
            915                 920                 925
```

<210> 5692

<211> 451
<212> PRT
<213> S.epidermidis

<400> 5692
Met Asp Ser Val Glu Ile Ala Arg Leu Leu Thr Gly Met Thr Leu Ala
1   5   10   15
Val His Ile Ile Phe Ala Thr Ile Gly Val Gly Met Pro Leu Met Phe
            20   25   30
Ala Ile Ala Glu Phe Ile Gly Ile Lys Lys Asn Asp Ala Asn Tyr Ile
        35   40   45
Thr Leu Ala Lys Arg Trp Ser Lys Gly Tyr Thr Ile Thr Val Ala Val
    50   55   60
Gly Val Val Thr Gly Thr Ile Ile Gly Leu Gln Leu Ser Leu Val Trp
65   70   75   80
Pro Thr Phe Met Lys Met Gly Gly His Val Ile Ala Leu Pro Leu Phe
                85   90   95
Met Glu Thr Phe Ala Phe Phe Phe Glu Ala Ile Phe Leu Ser Ile Tyr
            100   105   110
Leu Tyr Thr Trp Glu Arg Phe Lys Asn Lys Trp Thr His Phe Phe Ile
        115   120   125
Ser Ile Pro Val Ile Ile Gly Gly Ser Phe Ser Ala Phe Phe Ile Thr
    130   135   140
Ser Val Asn Ser Phe Met Asn Thr Pro Ala Gly Phe Glu Ile Lys Asn
145   150   155   160
Gly Arg Met Val Asn Val Gln Pro Leu Glu Ala Met Phe Asn Ser Ser
                165   170   175
Phe Met Val Arg Ala Leu His Val Val Ala Thr Ala Gly Met Thr Met
            180   185   190
Ala Phe Ile Leu Ala Ala Ile Ala Ala Phe Lys Leu Leu Arg His Asn
            195   200   205
His Thr Glu Asp Arg Thr Tyr His Thr Lys Ala Leu Asn Leu Ser Met
    210   215   220
Ile Val Gly Phe Ile Asn Thr Val Leu Ser Met Ile Ala Gly Asp Leu
225   230   235   240
Ser Ala Lys Phe Leu His Lys Val Gln Pro Asp Lys Leu Ala Ala Tyr
                245   250   255
Glu Trp His Tyr Asp Thr Gln Ser His Ala Asn Leu Val Leu Phe Gly
            260   265   270
Val Leu Asn Glu Lys Thr His Glu Val Ser Gly Ala Leu Glu Ile Pro
        275   280   285
Gly Leu Leu Ser Phe Leu Ala Asp Asn Ser Phe Asn Thr Lys Val Lys
        290   295   300
Gly Leu Asn Glu Phe Pro Lys Asn Glu Leu Pro Pro Met Ile Val His
305   310   315   320
Tyr Phe Phe Asp Leu Met Val Ser Met Gly Ile Phe Cys Phe Ile Ile
            325   330   335
Ser Gly Leu Tyr Met Leu Phe Leu Ile Val Lys Lys Leu Arg Lys Tyr
        340   345   350
Val Thr Ser Asn Met Met Leu Tyr Ala Ile Leu Leu Thr Gly Pro Ala
        355   360   365
Ser Met Leu Ala Ile Glu Phe Gly Trp Phe Leu Thr Glu Met Gly Arg
    370   375   380
Gln Pro Trp Ile Ile Arg Gly Tyr Met Arg Val Ser Glu Ala Ala Thr
385   390   395   400
Gln Ala Gly Gly Ile Thr Leu Val Thr Thr Leu Phe Gly Leu Leu Tyr

```
                    405                    410                    415
Leu Leu Leu Leu Val Thr Ser Ala Tyr Val Leu Ile Arg Met Phe Lys
            420                    425                    430
Asn Gln Pro Ala Tyr Lys Asp Val Glu Lys Val Ile Lys Glu Arg Gly
        435                    440                    445
Glu Thr Lys
    450


<210> 5693
<211> 48
<212> PRT
<213> S.epidermidis


<400> 5693
Ser Cys Ser Val Asn Phe Asn Val Leu His Phe Met Tyr Leu Leu Leu
1                5                  10                    15
His Tyr His Tyr Ser Ser Tyr Ser Ile Lys Ile Ile Phe Leu Ile Asp
            20                    25                    30
Asn Leu Thr Ala Tyr Lys Leu Ile Tyr Leu Asn Phe Leu Gln Ile Asn
        35                    40                    45


<210> 5694
<211> 102
<212> PRT
<213> S.epidermidis


<400> 5694
Lys Ile Lys Val Tyr Glu Gly Glu Asp Thr Met Glu Tyr Gln Tyr Pro
1                5                  10                    15
Leu Asp Leu His Trp Thr Asn Asp Glu Met Met Lys Val Ile His Phe
            20                    25                    30
Phe Asn Lys Ile Glu Asn Tyr Tyr Glu Ala Ser Val Lys Gly Asp Glu
        35                    40                    45
Val Leu Asn Ala Tyr Lys Asn Phe Lys His Ile Val Pro Gly Lys Ala
    50                    55                    60
Asp Glu Lys Gln Ile Phe Lys Glu Phe Glu Asn Lys Ser Gly Tyr Asn
65                    70                    75                    80
Ser Tyr Lys Val Val Gln Glu Ile Lys Lys Asn Pro Asn Gln Thr Leu
                85                    90                    95
Phe Ser Lys Asp Phe Asp
            100


<210> 5695
<211> 341
<212> PRT
<213> S.epidermidis


<400> 5695
Phe Leu Lys Val Asn Ser Lys Cys Thr Ile Gln Val Arg Met Asn Glu
1                5                  10                    15
Met Val Lys Ile Ala Val Asp Met Met Gly Gly Asp Asp Ala Pro Gly
            20                    25                    30
Ile Val Leu Asp Ala Val Lys Lys Ala Val Glu Asp Phe Lys Asp Leu
        35                    40                    45
Glu Ile Ile Leu Phe Gly Asp Glu Ser Gln Tyr Asn Leu Ser His Glu
    50                    55                    60
```

```
Arg Ile Glu Phe Arg His Cys Thr Glu Lys Ile Glu Met Glu Asp Glu
65              70              75              80
Pro Val Arg Ala Ile Lys Arg Lys Lys Asp Ser Ser Met Val Lys Met
                85              90              95
Ala Glu Ala Val Lys Ser Gly Glu Ala Asp Gly Cys Val Ser Ala Gly
                100             105             110
Asn Thr Gly Ala Leu Met Ser Ala Gly Leu Phe Ile Val Gly Arg Ile
            115             120             125
Lys Gly Val Ala Arg Pro Ala Leu Val Val Thr Leu Pro Thr Thr Asp
    130             135             140
Gly Lys Gly Phe Val Phe Leu Asp Val Gly Ala Asn Ala Asp Ala Lys
145             150             155             160
Ala Glu His Leu Leu Gln Tyr Ala Gln Leu Gly Asn Ile Tyr Ala Gln
            165             170             175
Lys Ile Arg Gly Ile Gln Asn Pro Ser Val Ser Leu Leu Asn Ile Gly
            180             185             190
Thr Glu Ala Ala Lys Gly Asn Ser Leu Thr Lys Lys Ala Tyr Asp Leu
    195             200             205
Phe Glu Lys Asn Gln Ser Phe Asn Phe Thr Gly Asn Ile Glu Ala Lys
    210             215             220
Thr Leu Met Asp Gly Asn Val Asp Val Val Val Thr Asp Gly Tyr Thr
225             230             235             240
Gly Asn Met Val Leu Lys Asn Leu Glu Gly Thr Ala Lys Ser Ile Gly
            245             250             255
Lys Met Leu Lys Glu Thr Ile Met Ser Ser Phe Lys Asn Lys Leu Ala
            260             265             270
Gly Ala Val Leu Lys Lys Asp Leu Glu Thr Phe Ala Lys Lys Met Asp
    275             280             285
Tyr Ser Glu Tyr Gly Gly Ser Val Leu Leu Gly Leu Asp Gly Thr Val
    290             295             300
Val Lys Ala His Gly Ser Ser Asn Ala Lys Ala Phe Tyr Ser Ala Ile
305             310             315             320
Arg Gln Ala Lys Ile Ala Gly Glu Glu Asn Ile Val Gln Ile Met Lys
                325             330             335
Asp Thr Val Gly Glu
            340
```

<210> 5696
<211> 276
<212> PRT
<213> S.epidermidis

<400> 5696

```
Trp Glu Gly Val Ile Ser Val Lys Trp Tyr Gly Lys Leu Tyr Ile Ala
1               5               10              15
Leu Leu Ile Ser Val Leu Tyr Ile Pro Ile Phe Phe Leu Met Ile Tyr
            20              25              30
Ser Phe Asn Ser Ala Gly Asn Met Ser His Phe Glu His Phe Thr Leu
        35              40              45
Glu His Tyr His Ser Leu Phe His Asn Asp Arg Leu Met Ser Val Ile
    50              55              60
Phe Asn Thr Val Ala Val Ala Leu Leu Ser Ala Ser Ile Ala Thr Val
65              70              75              80
Ile Gly Thr Phe Gly Ala Ile Ala Leu Tyr Tyr Leu Arg Asn Lys Arg
                85              90              95
Phe Lys Val Thr Leu Leu Thr Met Asn Asn Val Leu Met Val Ser Ser
```

```
                    100                      105                      110
Asp Val Val Ile Gly Ala Ser Phe Leu Ile Met Phe Thr Ala Ile Gly
        115                      120                      125
His Phe Thr Gly Leu Gly Leu Gly Phe Ser Thr Val Leu Ala Ser His
        130                      135                      140
Ile Ala Phe Cys Ile Pro Ile Val Val Ile Ile Val Leu Pro Gln Leu
145                      150                      155                      160
Tyr Glu Met Asn Asp Asn Met Leu Asn Ala Ala Arg Asp Leu Gly Ala
                    165                      170                      175
Asn Glu Ser Gln Leu Leu Thr Ser Ile Ile Ile Pro Asn Ile Met Pro
                    180                      185                      190
Ser Ile Ile Gly Gly Phe Phe Met Ala Leu Thr Tyr Ser Leu Asp Asp
        195                      200                      205
Phe Thr Val Ser Phe Phe Val Thr Gly Asn Gly Phe Ser Val Leu Ser
        210                      215                      220
Val Glu Val Tyr Ala Met Ala Arg Lys Gly Ile Ser Met Glu Ile Asn
225                      230                      235                      240
Ala Ile Ser Thr Ile Ile Phe Ile Ala Ile Met Phe Gly Val Phe Gly
                    245                      250                      255
Tyr Tyr Phe Ile Gln His Ile Val Asn Arg Gln Lys Lys Met Lys Arg
                    260                      265                      270
Gly Val Asn Glu
        275


<210> 5697
<211> 503
<212> PRT
<213> S.epidermidis

<400> 5697
Leu Lys Ser Leu Asn Arg Gly Val Ser Tyr Arg Met Lys Lys Ala Ile
1               5                       10                      15
Leu Ser Val Ser Asn Lys Ser Gly Ile Val Glu Phe Ala Lys Ala Leu
                    20                      25                      30
Thr Asn Leu Asp Tyr Glu Leu Tyr Ser Thr Gly Gly Thr Lys Arg Val
        35                      40                      45
Leu Glu Asp Ala Asn Ile Asn Ile Lys Ser Val Ser Glu Leu Thr Gln
        50                      55                      60
Phe Pro Glu Ile Met Asp Gly Arg Val Lys Thr Leu His Pro Ala Val
65                      70                      75                      80
His Gly Gly Ile Leu Ala Asp Arg Asp Lys Glu His His Leu Glu Gln
                    85                      90                      95
Leu Arg Glu Gln His Ile Asp Leu Ile Asp Met Val Val Val Asn Leu
                    100                     105                     110
Tyr Pro Phe Gln Gln Thr Val Ala Gln Pro Asp Val Thr Glu Thr Asp
        115                     120                     125
Ala Ile Glu Asn Ile Asp Ile Gly Gly Pro Thr Met Leu Arg Ala Ala
        130                     135                     140
Ala Lys Asn Phe Lys His Val Thr Thr Ile Val His Pro Ser Asp Tyr
145                     150                     155                     160
Asn Glu Val Ile Glu Arg Ile Lys Asn His Gln Leu Asp Glu Ala Tyr
                    165                     170                     175
Arg Lys Ser Leu Met Val Lys Val Phe Gln His Thr Asn Glu Tyr Asp
        180                     185                     190
His Ala Ile Val Asn Tyr Phe Lys Asp Asn Lys Glu Thr Leu Arg Tyr
        195                     200                     205
```

```
Gly Glu Asn Pro Gln Gln Ser Ala Tyr Phe Val Arg Thr Ser Asp Ser
    210                 215                 220
Lys His Thr Ile Ala Gly Ala Lys Gln Leu His Gly Lys Gln Leu Ser
225                 230                 235                 240
Phe Asn Asn Ile Lys Asp Ala Asp Ala Ala Leu Ser Leu Val Lys Lys
                245                 250                 255
Phe Asn Glu Pro Thr Ala Val Ala Val Lys His Met Asn Pro Cys Gly
                260                 265                 270
Val Gly Ile Gly Gln Ser Ile Asp Glu Ala Phe Gln His Ala Tyr Glu
            275                 280                 285
Ala Asp Asn Gln Ser Ile Phe Gly Gly Ile Ile Ala Leu Asn Arg Thr
    290                 295                 300
Val Asp Val Lys Leu Ala Glu Ala Leu His Ser Ile Phe Leu Glu Val
305                 310                 315                 320
Val Ile Ala Pro Gln Phe Thr Glu Glu Ala Leu Lys Ile Leu Thr Gln
                325                 330                 335
Lys Lys Asn Ile Arg Leu Leu Gln Ile Asp Met Thr Ile Asp Asn Ala
                340                 345                 350
Glu Gln Glu Phe Val Ser Val Ser Gly Gly Tyr Leu Val Gln Asp Lys
            355                 360                 365
Asp Asn Lys Asp Val Thr Arg Asn Asp Met Thr Val Ala Thr Asp Ile
    370                 375                 380
Gln Pro Thr Glu Ala Gln Trp Glu Ala Met Leu Leu Gly Trp Lys Val
385                 390                 395                 400
Val Ser Ala Val Lys Ser Asn Ala Val Ile Leu Ser Asn Asn Lys Gln
                405                 410                 415
Thr Val Gly Ile Gly Ala Gly Gln Met Asn Arg Val Gly Ser Ala Lys
            420                 425                 430
Ile Ala Ile Glu Arg Ala Ile Glu Ile Asn Asp Asn Val Ala Leu Val
            435                 440                 445
Ser Asp Gly Phe Phe Pro Met Gly Asp Thr Val Glu Tyr Ala Ala Glu
    450                 455                 460
His Gly Ile Lys Ala Ile Ile Gln Pro Gly Gly Ser Ile Lys Asp Gln
465                 470                 475                 480
Asp Ser Ile Asp Met Ala Asn Lys Tyr Gly Ile Thr Met Val Met Thr
                485                 490                 495
Gly Met Arg His Phe Lys His
            500
```

```
<210> 5698
<211> 131
<212> PRT
<213> S.epidermidis

<400> 5698
Arg Asn Thr Leu Ser Ala Ser Leu Asn Ala Ser Ile Ile Gly Val Asp
1                5                  10                  15
Leu Ser Thr Ile Ser Asn Lys Arg Ser Phe Gly Ile Thr Ile Asn Val
            20                  25                  30
Ser Thr Ala Ala Phe Ile Asp Ser Thr Pro Ala Ala Ala Cys Val Trp
            35                  40                  45
Arg Leu Arg Pro Ser Lys Pro Asn Gly Arg Val Thr Thr Pro Thr Val
    50                  55                  60
Lys Ala Pro Ile Ser Phe Ala Ile Leu Ala Thr Thr Gly Ala Ala Pro
65                  70                  75                  80
Val Pro Val Pro Pro Pro Ile Pro Ala Val Thr Asn Thr Ile Ser Ala
```

```
                     85                      90                      95
Pro Trp Ile Ala Ser Ser Ile Cys Ser Leu Asp Ser Ser Ala Ala Phe
             100                     105                     110
Phe Pro Ile Ser Gly Leu Ala Pro Ala Pro Asn Pro Arg Val Asn Phe
             115                     120                     125
Ser Pro Ile
        130


<210> 5699
<211> 51
<212> PRT
<213> S.epidermidis


<400> 5699
Lys Asp Thr Phe Ser Lys Ser Asp Ile Glu Cys Arg Phe Glu Tyr His
1               5                   10                  15
Ile Gly Phe Tyr Ile Phe Thr Asn Trp Thr Leu Phe Ile Ile Ala Ile
             20                  25                  30
Ser Ala Phe Ile Tyr Thr Val Pro Ile Ile Ser Ile Ala Ser Lys Ser
         35                  40                      45
Ser Cys Asp
      50


<210> 5700
<211> 312
<212> PRT
<213> S.epidermidis


<400> 5700
Tyr Phe Lys Leu Met Met Gly Cys Leu Ser Leu Phe Arg Lys Gln Asn
1               5                   10                  15
Leu Lys Trp Leu Gly Val Leu Ala Thr Ile Ile Met Thr Phe Val Gln
             20                  25                  30
Leu Gly Gly Ala Leu Val Thr Lys Thr Gly Ser Glu Asp Gly Cys Gly
         35                  40                      45
Ser Ser Trp Pro Leu Cys Asn Gly Ala Leu Leu Pro Glu Asn Leu Pro
      50                  55                  60
Ile Gln Thr Ile Ile Glu Leu Ser His Arg Ala Val Ser Ala Ile Ser
65                  70                  75                      80
Leu Ile Val Val Leu Trp Leu Val Ile Thr Ala Trp Lys Asn Ile Gly
                 85                  90                  95
Tyr Ile Lys Glu Ile Lys Pro Leu Ser Ile Ile Ser Val Gly Phe Leu
             100                     105                     110
Leu Val Gln Ala Leu Val Gly Ala Ala Ala Val Ile Trp Gln Gln Asn
             115                     120                     125
Pro Tyr Val Leu Ala Leu His Phe Gly Ile Ser Leu Ile Ser Phe Ser
             130                     135                     140
Ser Val Phe Leu Met Thr Leu Ile Ile Phe Ser Ile Asp Lys Lys Tyr
145                     150                     155                     160
Glu Ala Asp Ile Leu Phe Ile His Lys Pro Leu Arg Ile Leu Thr Trp
                 165                     170                     175
Leu Met Ala Ile Ile Val Tyr Leu Thr Ile Tyr Thr Gly Ala Leu Val
             180                     185                     190
Arg His Thr Lys Ser Ser Leu Ala Tyr Gly Ala Trp Pro Ile Pro Phe
             195                     200                     205
Asp Asp Ile Val Pro His Asn Ala His Asp Trp Val Gln Phe Ser His
```

```
            210                 215                 220
Arg Gly Met Ala Phe Ile Thr Phe Ile Trp Ile Met Ile Thr Phe Ile
225                 230                 235                 240
His Ala Ile Lys Asn Tyr Ser Asp Asn Arg Thr Val Arg Tyr Gly Tyr
                245                 250                 255
Thr Ala Ser Phe Ile Leu Val Ile Leu Gln Val Ile Thr Gly Ala Leu
                260                 265                 270
Ser Val Ile Thr Asn Val Asn Leu Ile Ile Ala Leu Phe His Ala Leu
                275                 280                 285
Phe Ile Thr Tyr Leu Phe Gly Met Ile Ala Tyr Phe Ile Leu Leu Met
                290                 295                 300
Leu Arg Thr Thr Arg Ser Leu Lys
305                 310
```

```
<210> 5701
<211> 216
<212> PRT
<213> S.epidermidis
```

```
<400> 5701
Gln Phe Lys Leu Tyr Val Ser Gln Gly Gly Leu Phe Leu Ala Gln Ser
1               5                   10                  15
Lys Asn Glu Phe Tyr Leu Arg Arg Leu His Ser Leu Leu Gly Val Ile
            20                  25                  30
Pro Ile Gly Ala Phe Leu Ile Val His Leu Met Val Asn His Gln Ala
        35                  40                  45
Thr Gln Gly Ala Glu Ala Phe Asn Arg Ala Ser Gly Phe Met Glu Ser
        50                  55                  60
Leu Pro Phe Leu Ile Val Met Glu Phe Ile Leu Ile Tyr Ile Pro Leu
65                  70                  75                  80
Leu Tyr His Gly Leu Phe Gly Leu His Ile Ala Phe Thr Ala Lys Glu
                85                  90                  95
Asn Ile Gly His Tyr Ser Leu Phe Arg Asn Trp Met Phe Phe Phe Gln
            100                 105                 110
Arg Val Ser Gly Ile Leu Ala Phe Val Phe Ile Ala Met His Leu Trp
            115                 120                 125
Gln Thr Arg Leu Gln Lys Ala Phe Tyr Gly Lys Ser Val Asp Tyr Asn
        130                 135                 140
Leu Met His Glu Thr Leu Gln His Pro Leu Trp Ala Ile Phe Tyr Ile
145                 150                 155                 160
Ile Cys Val Ile Ala Val Val Phe His Phe Ala Asn Gly Leu Trp Ser
                165                 170                 175
Phe Cys Val Thr Trp Gly Phe Leu Gln Ser Lys Lys Ser Gln Arg Val
            180                 185                 190
Phe Thr Trp Ile Ser Leu Ile Val Phe Leu Val Ile Ser Tyr Ile Gly
        195                 200                 205
Val Ala Ala Val Ile Ala Phe Ile
210                 215
```

```
<210> 5702
<211> 42
<212> PRT
<213> S.epidermidis
```

```
<400> 5702
Ile Ile Lys Leu Gln Phe Glu Cys Tyr Phe Ile Asn His Ile Thr Asn
```

```
1                   5                       10                      15
Ala Arg Leu His Phe Arg Leu Lys Phe Arg Ala Phe Val Ile Tyr Asn
            20                      25                      30
Leu Leu Lys Thr Asn Leu Val Asn Met Glu
        35                      40
```

<210> 5703
<211> 59
<212> PRT
<213> S.epidermidis

<400> 5703
```
Ile Ser Thr Ser Leu Ile Lys Gly Phe Cys Phe Lys Phe Leu Ile Ala
1               5                       10                      15
Leu Phe Leu Leu Lys Val Tyr Ile Arg Asp Arg Glu Val Thr Leu Ser
            20                      25                      30
Ser Phe Phe Ile Leu Leu Val Leu Thr Leu Leu Leu Pro Leu Thr Phe
        35                      40                      45
Thr Phe Asp Ile Leu Leu Ser Gly Val Thr Ile
    50                      55
```

<210> 5704
<211> 394
<212> PRT
<213> S.epidermidis

<400> 5704
```
Met Leu Glu Phe Glu Gln Gly Phe Asn His Leu Ala Thr Leu Lys Val
1               5                       10                      15
Ile Gly Val Gly Gly Gly Gly Asn Asn Ala Val Asn Arg Met Ile Asp
            20                      25                      30
His Gly Met Asn Asn Val Glu Phe Ile Ala Ile Asn Thr Asp Gly Gln
        35                      40                      45
Ala Leu Asn Leu Ser Lys Ala Glu Ser Lys Ile Gln Ile Gly Glu Lys
    50                      55                      60
Leu Thr Arg Gly Leu Gly Ala Gly Ala Asn Pro Glu Ile Gly Lys Lys
65                      70                      75                      80
Ala Ala Glu Glu Ser Arg Glu Gln Ile Glu Asp Ala Ile Gln Gly Ala
                85                      90                      95
Asp Met Val Phe Val Thr Ala Gly Met Gly Gly Gly Thr Gly Thr Gly
            100                     105                     110
Ala Ala Pro Val Val Ala Lys Ile Ala Lys Glu Met Gly Ala Leu Thr
        115                     120                     125
Val Gly Val Val Thr Arg Pro Phe Gly Phe Glu Gly Arg Lys Arg Gln
        130                     135                     140
Thr Gln Ala Ala Ala Gly Val Glu Ser Met Lys Ala Ala Val Asp Thr
145                     150                     155                     160
Leu Ile Val Ile Pro Asn Asp Arg Leu Leu Asp Ile Val Asp Lys Ser
                165                     170                     175
Thr Pro Met Met Glu Ala Phe Lys Glu Ala Asp Asn Val Leu Arg Gln
            180                     185                     190
Gly Val Gln Gly Ile Ser Asp Leu Ile Ala Val Ser Gly Glu Val Asn
        195                     200                     205
Leu Asp Phe Ala Asp Val Lys Thr Ile Met Ser Asn Gln Gly Ser Ala
    210                     215                     220
Leu Met Gly Ile Gly Val Ser Ser Gly Glu Asn Arg Ala Val Glu Ala
```

```
225                  230                  235                  240
Ala Lys Lys Ala Ile Ser Ser Pro Leu Leu Glu Thr Ser Ile Val Gly
                245                  250                  255
Ala Gln Gly Val Leu Met Asn Ile Thr Gly Gly Glu Ser Leu Ser Leu
                260                  265                  270
Phe Glu Ala Gln Glu Ala Ala Asp Ile Val Gln Asp Ala Ala Asp Glu
            275                  280                  285
Asp Val Asn Met Ile Phe Gly Thr Val Ile Asn Pro Glu Leu Gln Asp
        290                  295                  300
Glu Ile Val Val Thr Val Ile Ala Thr Gly Phe Glu Asp Lys Pro Ser
305                  310                  315                  320
Ser Gln Gly Arg Lys Ala Thr Ser Thr Gly Phe Gly Ser Ser Val Asn
                325                  330                  335
Ser Ser Ser Asn His Gln Ser Gly Ala Ser Ala Lys Glu Asp Ser Phe
                340                  345                  350
Ser Ala His Thr Ser His Ser Gln Ser Ser Glu Ser Val Asn Glu Arg
            355                  360                  365
Ser His Thr Thr Lys Asp Asp Asp Ile Pro Ser Phe Ile Arg Asn Arg
        370                  375                  380
Glu Glu Arg Arg Ser Arg Arg Thr Arg Arg
385                  390
```

<210> 5705
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5705

```
Lys Asn Tyr Ser Ser Tyr Ser Ser Ser Lys Gln Lys Ile Gln Gln Pro
1               5                   10                  15
His Met Arg Leu Leu Asp Leu Phe Leu Val Phe Tyr Tyr Leu Glu Thr
                20                  25                  30
Thr Ser Ser Pro Leu Tyr Glu Pro Gln Phe Leu His Thr Arg
            35                  40                  45
```

<210> 5706
<211> 198
<212> PRT
<213> S.epidermidis

<400> 5706

```
Tyr Thr Tyr Ser Phe Ile Gly Gly Arg Ile Val Thr Asn Ile Ala Ile
1               5                   10                  15
Phe Ala Ser Gly Ser Gly Ser Asn Phe Glu Asn Ile Val Lys His Ile
                20                  25                  30
Gln Thr Gly Gln Leu Ser Gly Ile Asn Val Thr Ala Leu Tyr Thr Asp
            35                  40                  45
Asn Glu Gly Val Pro Cys Ile Asp Arg Ala Lys Asn Leu Asn Ile Pro
        50                  55                  60
Ile His Ile Asn Lys Pro Lys Asp Phe Ser Ser Lys Ser Leu Tyr Glu
65                  70                  75                  80
Gln His Leu Leu Lys Leu Leu Ser Ser Glu Glu Val Gln Trp Ile Val
                85                  90                  95
Leu Ala Gly Tyr Met Arg Leu Val Gly Gln Asp Leu Leu Gln Ala Tyr
            100                 105                 110
Glu Gly Arg Ile Leu Asn Ile His Pro Ser Leu Leu Pro Lys Phe Lys
```

```
            115                    120                    125
Gly Leu Asp Ala Ile Gly Gln Ala Leu Glu Ser Gly Asp Thr Val Thr
    130                    135                    140
Gly Ser Thr Val His Tyr Val Asp Ser Gly Met Asp Thr Gly Glu Ile
145                    150                    155                    160
Ile Glu Gln Gln Gln Cys Asp Ile Lys Pro Asp Asp Thr Lys Glu Gln
                   165                    170                    175
Leu Glu Asp Arg Val Lys His Leu Glu Tyr Glu Leu Tyr Pro Arg Val
                180                    185                    190
Ile Ala Lys Ile Ile Lys
        195
```

<210> 5707
<211> 395
<212> PRT
<213> S.epidermidis

<400> 5707
```
Glu Arg Tyr Ser Phe Met Lys Leu Ala Thr Leu Asn Lys Gly Lys Glu
1               5                    10                    15
Thr Lys Tyr Leu Asn His Tyr Pro Leu Ile Asp Glu Glu Asp Leu Phe
            20                    25                    30
Glu His Asp His Leu Lys Glu Gly Asp Leu Ile Thr Leu Val Thr Glu
            35                    40                    45
Gln Gln Gln Tyr Ile Ala Thr Gly Tyr Ile Gly Arg Gln His Lys Gly
        50                    55                    60
Leu Gly Trp Val Leu Ser Tyr Asn Gln Asn Glu Glu Ile Asn Thr Leu
65                    70                    75                    80
Phe Phe Lys Arg Leu Phe Glu Ala Ala Leu Glu Glu Arg Gln Tyr Tyr
                85                    90                    95
Phe Asn Ile Glu Gly Thr Asn Ala Phe Arg Leu Phe Asn Ala Glu Gly
            100                    105                    110
Asp Gly Val Gly Gly Leu Thr Ile Asp Asn Tyr Asn Gly His Leu Leu
            115                    120                    125
Ile Gln Trp Tyr Ser Lys Gly Ile Tyr Lys Phe Arg Phe Pro Ile Leu
        130                    135                    140
Glu Ala Ile Lys Glu Val Tyr Glu Tyr Thr Ser Ile Phe Glu Lys Met
145                    150                    155                    160
Arg Phe Lys Gly Thr Ser Tyr Thr Gly Gly Phe Val Glu Gly Asn Ala
                165                    170                    175
Pro Glu Phe Pro Ile Val Val Glu Glu Asn Phe Thr Phe Tyr Asn Val
            180                    185                    190
Asp Leu Asn Asp Gly Leu Met Thr Gly Ile Phe Leu Asp Gln Lys Glu
        195                    200                    205
Val Arg Lys Lys Leu Arg Asp Gln Phe Ser Glu Arg Arg His Val Leu
    210                    215                    220
Asn Leu Phe Ser Tyr Thr Gly Ala Phe Ser Val Ile Ala Ala Glu Asn
225                    230                    235                    240
Ala Asn Ser Thr Thr Ser Val Asp Leu Ala Asn Arg Ser Arg Gly Leu
                245                    250                    255
Thr Glu Glu Asn Phe Gly Leu Asn Gly Ile Asn Pro Lys Ser Gln Tyr
            260                    265                    270
Ile Tyr Val Met Asp Thr Phe Asp Phe Tyr Asn Tyr Ala Gly Arg His
        275                    280                    285
Gly His Gln Tyr Asp Thr Ile Val Ile Asp Pro Pro Ser Phe Ala Arg
    290                    295                    300
```

Asn Lys Lys Lys Thr Phe Ser Val Gln Lys Asp Tyr Asn Leu Leu Ile
305   310   315   320
Glu Gly Ala Leu Asn Ile Leu Ser Pro Gly Gly Thr Leu Leu Leu Cys
                325   330   335
Thr Asn Ser Ser Ala Phe Ser Leu Lys Ala Phe Lys Asn Val Ile Lys
                340   345   350
Lys Thr Leu Ala Gln Asn Asn Ile Val Tyr Glu Ile Asn Glu Val Met
                355   360   365
Gly Leu Pro Lys Asp Phe Lys Thr His Pro His Tyr Lys Pro Ser Lys
        370   375   380
Tyr Leu Lys Ala Val Phe Val Thr Ile Lys His
385   390   395

<210> 5708
<211> 75
<212> PRT
<213> S.epidermidis

<400> 5708
Cys Asn Asn Ser Met Asn Val Gly Gln Ala Arg Val Ala His Tyr Ile
1   5   10   15
His Leu Gln Tyr Leu Lys His Glu Leu Leu Leu Lys Ile Arg Leu Val
                20   25   30
Ala Phe Asp Ile Leu His Leu Thr Val Phe Asp Ser Val Gln Gln Arg
            35   40   45
Leu Asn Leu Gln Tyr Glu Cys Leu Gln Asp Leu Cys Ser Pro Tyr Tyr
        50   55   60
Ile Leu Arg Leu Arg Tyr His Phe Tyr His Ala
65   70   75

<210> 5709
<211> 413
<212> PRT
<213> S.epidermidis

<400> 5709
Val Lys Phe Leu Ala Ser Gln Leu Phe Lys Gly Gly Phe Phe Ile Asp
1   5   10   15
Tyr Leu Gly Val Asp Ile Ser Lys Arg Ser Ser Val Val Ala His Tyr
                20   25   30
Lys Asn Gly Lys Phe Gln Lys Glu Phe Phe Ile Gln Asn Asn Lys Asn
        35   40   45
Gly Tyr Asn Tyr Leu Leu Lys Tyr Leu Asn Asp Leu Asp His Pro Gln
        50   55   60
Leu Ile Phe Glu Ser Thr Gly Ile Tyr Ser Arg Gly Met Glu Arg Phe
65   70   75   80
Cys Cys Val Asn Gln Ile Asn Tyr Ile Gln Met Asn Pro Leu Glu Ala
                85   90   95
Lys Phe Lys Thr Ser Ala Leu Arg Ser Trp Lys Thr Asp Gln Ala Asp
            100   105   110
Ala His Lys Leu Ala Cys Leu Gly Pro Thr Leu Lys Gln Thr Asp Asn
            115   120   125
Leu Pro Ile His Glu Leu Ile Phe Phe Glu Leu Arg Glu Arg Val Arg
        130   135   140
Phe His Leu Glu Ile Glu Asn Glu Gln Asn Arg Leu Lys Phe Gln Ile
145   150   155   160

```
Leu Glu Leu Leu His Gln Thr Phe Pro Gly Leu Glu Arg Leu Phe Ser
            165                 170                 175
Ser Arg Tyr Ser Ile Ile Ala Leu Asn Ile Ala Glu Ile Phe Thr His
            180                 185                 190
Pro Asp Met Val Leu Asp Ile Asp Lys Asp Val Leu Ile Thr His Ile
            195                 200                 205
Phe Asn Ser Thr Asp Lys Gly Met Ser Met Asp Lys Ala Thr Lys Tyr
        210                 215                 220
Ala Leu Gln Leu Arg Val Ile Ala Gln Glu Ser Tyr Pro Asn Val Asp
225                 230                 235                 240
Arg His Ser Phe Leu Val Glu Lys Leu Arg Leu Leu Ile Gln Gln Leu
            245                 250                 255
Lys Gln Ser Ile His His Leu Lys Gln Leu Asp Asp Ala Met Ile Gln
            260                 265                 270
Leu Ala Gln Gln Leu Asp Tyr Phe Glu Asn Ile His Ser Ile Pro Gly
            275                 280                 285
Ile Gly Lys Leu Ser Thr Ala Met Ile Ile Gly Glu Ile Gly Asp Ile
            290                 295                 300
Lys Arg Phe Lys Ser Asn Lys Gln Leu Asn Ala Phe Val Gly Ile Asp
305                 310                 315                 320
Ile Lys Arg Tyr Gln Ser Gly His Thr His Cys Arg Asp Thr Ile Asn
            325                 330                 335
Lys Arg Gly Asn Lys Lys Ala Arg Lys Leu Leu Phe Trp Val Ile Met
            340                 345                 350
Asn Ile Ile Arg Gly Gln His His Tyr Asp Asn His Val Val Asp Tyr
            355                 360                 365
Tyr Tyr Lys Leu Arg Lys Gln Pro Asn Glu Lys Pro His Lys Thr Ala
370                 375                 380
Ile Ile Ala Cys Ile Asn Arg Leu Leu Lys Thr Ile His Tyr Leu Val
385                 390                 395                 400
Met Asn His Lys Leu Tyr Asp Tyr Gln Met Ser Pro His
            405                 410
```

```
<210> 5710
<211> 273
<212> PRT
<213> S.epidermidis
```

```
<400> 5710
Lys Glu Leu Ser Thr Met Asp Pro Ser Leu Ile Leu Pro Tyr Leu Trp
1               5                   10                  15
Val Leu Leu Val Leu Val Phe Leu Glu Gly Leu Leu Ala Ala Asp Asn
            20                  25                  30
Ala Ile Val Met Ala Val Met Val Lys His Leu Pro Pro Lys Gln Arg
        35                  40                  45
Lys Lys Ala Leu Phe Tyr Gly Leu Leu Gly Ala Phe Ile Phe Arg Phe
    50                  55                  60
Ile Ala Leu Phe Leu Ile Ser Ile Ile Ala Asn Phe Trp Trp Ile Gln
65                  70                  75                  80
Ala Ala Gly Ala Val Tyr Leu Ile Tyr Met Ser Ile Lys Asn Leu Trp
                85                  90                  95
Gln Phe Phe His Gln Ser Asn Glu Lys His His Lys Glu Thr Gly Asp
            100                 105                 110
Glu His His Phe Asp Glu Thr Gly Asn Glu Lys Glu Val Gly Pro Lys
        115                 120                 125
Ser Phe Trp Gly Thr Val Phe Lys Val Glu Phe Ala Asp Ile Ala Phe
```

```
     130                      135                      140
Ala Ile Asp Ser Met Leu Ala Ala Leu Ala Ile Ala Val Thr Leu Pro
145                      150                      155                      160
Lys Val Gly Ile His Phe Gly Gly Met Asp Leu Gly Gln Phe Ile Val
              165                      170                      175
Met Phe Leu Gly Gly Met Ile Gly Val Ile Leu Met Arg Phe Ala Ala
          180                      185                      190
Thr Trp Phe Val Glu Leu Leu Asn Lys Tyr Pro Gly Leu Glu Gly Ala
          195                      200                      205
Ala Phe Ala Ile Val Gly Trp Val Gly Ile Lys Leu Ile Ile Met Val
      210                      215                      220
Leu Ala His Pro Asp Ile Gly Val Leu Pro Glu Ala Phe Pro His Ser
225                      230                      235                      240
Ala Leu Trp Gln Thr Ile Phe Trp Val Val Leu Val Gly Leu Val Leu
              245                      250                      255
Ile Gly Trp Leu Thr Ser Ala Ile Gly Asn Lys Lys Lys Gly Asn Gln
          260                      265                      270
Lys
```

<210> 5711
<211> 53
<212> PRT
<213> S.epidermidis

<400> 5711
```
Tyr Gln Arg Ser His His His Phe Arg Tyr Thr Ile Tyr Arg Asn Phe
1               5                      10                      15
Lys Ile Tyr Ile Lys Ala Phe Ile Thr Val Phe Gln Thr Lys Tyr Leu
          20                      25                      30
Asn Ile Ile Arg Phe Lys Asn Glu Tyr Leu Cys Lys Ile Met Val Leu
          35                      40                      45
Phe Ser Leu Ser Ile
      50
```

<210> 5712
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5712
```
Leu Asn Gly Ser Ala Val His Leu Asp Lys Gln Met Asn Pro Glu Phe
1               5                      10                      15
Tyr Ser Glu Leu Glu Gln Ile Gln Glu Gln Lys Asn Gln Lys Arg Ile
          20                      25                      30
Glu Val Cys Ile Tyr Asn Met His Ile
          35                      40
```

<210> 5713
<211> 271
<212> PRT
<213> S.epidermidis

<400> 5713
```
Val Arg Leu Leu Met Leu His Tyr Asn Phe Tyr Glu Ser Lys Asn Gln
1               5                      10                      15
```

Ser Lys Gln Leu Leu Val Met Leu His Gly Phe Ile Ser Asp Ala Thr
         20   25   30
Thr Tyr His Ser His Ile Glu Arg Leu Val Glu His Thr Asn Val Leu
         35   40   45
Thr Ile Asp Leu Pro Gly His Gly Leu Asp Thr Ser Ser Met Asp Glu
         50   55   60
Val Trp Asp Phe Pro Phe Ile Thr Arg Gln Leu Asp Glu Val Leu Ile
65   70   75   80
Gln Tyr Gln Thr Tyr Asp Val Phe Leu Leu Gly Tyr Ser Met Gly Gly
                 85   90   95
Arg Val Ala Leu Tyr Tyr Ala Ile His Gly Asn Glu Thr Leu Ser Gly
         100   105   110
Leu Leu Leu Val Ser Thr Ser Ala Gly Ile Gln Asn Glu Thr Asp Lys
         115   120   125
Val Glu Arg Ala Gln Val Asp Ala Ala Arg Ala Lys Val Leu Glu Ile
         130   135   140
Ala Gly Leu Asp Ile Phe Val Asn Asp Trp Glu Lys Leu Pro Leu Phe
145   150   155   160
Arg Ser Gln Tyr Asn Leu Ala Pro Glu Ile Arg Gln Ser Ile Arg Asn
                 165   170   175
Asn Arg Leu Asn Gln Asp Ala Asn Lys Leu Ala Lys Ala Leu Arg Asp
                 180   185   190
Tyr Gly Thr Gly His Met Pro Asn Leu Trp Pro His Leu Ser Leu Ile
         195   200   205
Arg Ile Pro Thr Leu Ile Leu Val Gly Glu Lys Asp Lys Lys Phe Val
         210   215   220
Gln Ile Gly Gln Gln Leu Glu Asn His Leu Gln Asp Ser His Lys Val
225   230   235   240
Gln Ile Ser Asn Val Gly His Thr Ile His Val Glu Asp Ser Thr Glu
                 245   250   255
Phe Asp Thr Ile Ile Leu Gly Phe Leu Lys Glu Glu Gln Asn Asp
                 260   265   270

<210> 5714
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5714
Arg Gly Ala Pro Ala Lys Gly Val Gly Arg Glu Ser Gly Ala Arg Val
1   5   10   15
Arg Ile Pro Pro Phe Pro Leu Phe Val Tyr Thr Ser Leu Asn Pro Val
         20   25   30
Lys Gln Asn Val Asp Leu Thr Gly Phe Cys Tyr Ile Leu Leu Ser Ile
         35   40   45
Val Lys Pro Arg Lys Leu Asn
   50   55

<210> 5715
<211> 274
<212> PRT
<213> S.epidermidis

<400> 5715
Tyr Met Gln Pro Tyr Leu Ile Cys Leu Asp Leu Asp Gly Thr Leu Leu
1   5   10   15

```
Asn Asp Asn Lys Glu Ile Ser Pro Tyr Thr Lys Gln Val Leu Thr Glu
            20                  25                  30
Leu Gln Gln Cys Gly His Tyr Val Met Ile Ala Thr Gly Arg Pro Tyr
        35                  40                  45
Arg Ala Ser Gln Met Tyr Tyr His Glu Leu Asn Met Ser Thr Pro Val
        50                  55                  60
Val Asn Phe Asn Gly Ala Phe Val His His Pro Lys Ala Asn Asp Phe
65                  70                  75                  80
Lys Val Ile His Glu Val Leu Asp Val Glu Ile Ser Lys Asn Ile Ile
                85                  90                  95
Thr Ala Leu Gln Gln Ser His Ile Thr Asn Ile Ile Ala Glu Val Lys
            100                 105                 110
Asp Tyr Val Phe Ile Asn Ser Tyr Asp Pro Arg Leu Phe Glu Gly Phe
            115                 120                 125
Ser Met Gly Asn Pro Lys Ile Gln Thr Gly Asn Leu Leu Glu Asn Leu
            130                 135                 140
Asn Glu Ala Pro Thr Ser Leu Leu Val Glu Ala Glu Glu Glu Asn Ile
145                 150                 155                 160
Pro Glu Ile Lys Asp Met Leu Thr His Phe Tyr Ala Glu Asn Ile Glu
                165                 170                 175
His Arg Arg Trp Gly Ala Pro Phe Pro Val Ile Glu Ile Val Lys Arg
                180                 185                 190
Gly Ile Asn Lys Ala Arg Gly Ile Lys His Val Gln Asn Tyr Leu Asn
            195                 200                 205
Ile Ala Asp Asp His Ile Ile Ala Phe Gly Asp Glu Asp Asn Asp Ile
            210                 215                 220
Glu Met Ile Lys Phe Ala Thr His Gly Ile Ala Met Ala Asn Gly Leu
225                 230                 235                 240
Lys Asp Leu Lys Glu Ile Ala Asn Glu Thr Lys Phe Ser Asn Asn Glu
                245                 250                 255
Asp Gly Ile Gly Arg Tyr Leu Asn Asp Phe Phe Asn Leu Lys Met Arg
                260                 265                 270
Tyr Tyr
```

```
<210> 5716
<211> 373
<212> PRT
<213> S.epidermidis

<400> 5716
Cys Ile Arg Pro Lys Asn Ala Lys Ile Lys Glu Val Lys Val Met Thr
1               5                   10                  15
Glu Thr Val Leu Glu Val Asn Asp Leu His Val Ser Phe Asp Ile Ala
            20                  25                  30
Ala Gly Glu Val Gln Ala Val Arg Gly Val Asp Phe His Leu Asn Lys
        35                  40                  45
Gly Glu Thr Leu Ala Ile Val Gly Glu Ser Gly Ser Gly Lys Ser Val
        50                  55                  60
Thr Thr Lys Ala Ile Thr Lys Leu Phe Gln Lys Asp Thr Gly Arg Ile
65                  70                  75                  80
Lys Lys Gly Glu Ile Leu Phe Leu Gly Glu Asp Leu Ala Gln Lys Ser
                85                  90                  95
Glu Lys Glu Leu Ile Gln Leu Arg Gly Arg Asp Ile Ser Met Ile Phe
            100                 105                 110
Gln Asp Pro Met Thr Ser Leu Asn Pro Thr Met Gln Ile Gly Lys Gln
```

```
            115                 120                 125
Val Met Glu Pro Leu Ile Lys His Lys Lys Leu Ser Lys Ala Lys Ala
    130                 135                 140
Lys Gln Arg Ala Leu Glu Ile Leu Asn Leu Val Gly Leu Pro Arg Ala
145                 150                 155                 160
Glu Lys Arg Phe Lys Ala Tyr Pro His Gln Phe Ser Gly Gly Gln Arg
                165                 170                 175
Gln Arg Ile Val Ile Ala Ile Ala Leu Ala Cys Glu Pro Lys Ile Leu
            180                 185                 190
Ile Ala Asp Glu Pro Thr Thr Ala Leu Asp Val Thr Met Gln Ala Gln
            195                 200                 205
Ile Leu Asp Leu Met Lys Glu Leu Gln Asn Lys Ile Glu Thr Ser Ile
    210                 215                 220
Ile Phe Ile Thr His Asp Leu Gly Val Val Ala Asn Ile Ala Asp Lys
225                 230                 235                 240
Val Ala Val Met Tyr Gly Gly Gln Met Val Glu Thr Gly Asp Val Asn
                245                 250                 255
Glu Ile Phe Tyr Asp Pro Lys His Pro Tyr Thr Trp Gly Leu Leu Ser
                260                 265                 270
Ser Met Pro Asp Leu Thr Thr Ser Asn Asp Thr Asp Leu Ile Ala Ile
            275                 280                 285
Pro Gly Thr Pro Pro Asp Leu Leu His Pro Pro Ile Gly Asp Ala Phe
    290                 295                 300
Ala Arg Arg Ser Arg Tyr Ala Leu Asp Ile Asp Phe Lys Glu Glu Pro
305                 310                 315                 320
Pro Trp Phe Lys Ile Ser Pro Thr His Phe Val Lys Ser Trp Leu Leu
                325                 330                 335
Asp Ala Arg Ala Pro Lys Val Thr Pro Pro Ser Met Val Gln Lys Arg
            340                 345                 350
Leu Arg Thr Met Pro Ser Asn Tyr Glu Gln Pro His Arg Val Glu Arg
            355                 360                 365
Val Ala Phe Asn Glu
    370

<210> 5717
<211> 79
<212> PRT
<213> S.epidermidis

<400> 5717
Ile Lys Lys Pro Val Asn Glu Phe Met Lys Thr His Leu Leu Ser Ile
1               5                   10                  15
Leu Ile Gly Ile Met Ser Gln Ala His Arg Ser Val Glu Lys Pro Ser
            20                  25                  30
Val Leu Ser Leu Ile Leu Leu Arg Gly Asp Asn Asn Lys His Thr His
        35                  40                  45
Leu Phe Val Glu Phe Glu Glu Phe Asp Arg Ala Asn Glu Glu Lys His
    50                  55                  60
Ala Lys Val Glu Tyr His Ser Ser Lys Asn Lys Thr Asp Thr Leu
65                  70                  75

<210> 5718
<211> 42
<212> PRT
<213> S.epidermidis
```

<400> 5718
Val Tyr Tyr Thr Arg Phe Ile Ile Val Asp Lys Phe Ile Ile Ile Ser
1   5   10   15
Leu Ile Asn Leu Phe Leu Ile Ile Ile Asp Val Ile Tyr Pro Asn His
            20   25   30
Val Leu Leu Asp Ser Asp Lys Ile Ile His
        35   40

<210> 5719
<211> 79
<212> PRT
<213> S.epidermidis

<400> 5719
Asn Asn His Thr Glu Val Asp Ile Met Lys Val Asn Lys Thr Ile Tyr
1   5   10   15
Ile Ile Val Ala Leu Ile Leu Gly Gly Leu Gly Val His Lys Phe Tyr
            20   25   30
Ala Asp Gln Val Gly Gln Gly Ile Leu His Leu Val Phe Phe Trp Thr
        35   40   45
Gly Ile Pro Ser Val Val Ala Ile Ile His Ala Ile Ile Val Ile Phe
    50   55   60
Thr Lys Lys Ala Asp Glu Tyr Gly Tyr Ile Thr Phe Asp Lys Lys
65   70   75

<210> 5720
<211> 206
<212> PRT
<213> S.epidermidis

<400> 5720
Ser Arg Arg Leu Ile Lys Met Lys Asn Val Ser Lys Ala Leu Ile Trp
1   5   10   15
Phe Val Ile Ser Phe Ile Ile Phe His Ala Ile Leu Phe Val Met Trp
            20   25   30
Gly Glu His Gln Glu Tyr Trp Tyr Leu Tyr Thr Gly Ile Met Leu Ile
        35   40   45
Ala Gly Ile Ser Tyr Val Phe Tyr Gln Arg Asp Ile Ala Ser Lys Arg
    50   55   60
Leu Leu Thr Ser Ile Gly Met Gly Ile Ile Thr Ser Val Ala Leu Ile
65   70   75   80
Ile Ile Gln Leu Ile Phe Ser Leu Ile Ser Ser Glu Leu Ser Tyr Ala
            85   90   95
Ser Leu Ile Lys Glu Leu Ser Arg Thr Gly Val Tyr Phe Lys Trp Gln
            100   105   110
Met Leu Val Thr Leu Leu Phe Val Ile Pro Cys His Glu Leu Tyr Met
        115   120   125
Arg Thr Val Leu Gln Lys Glu Leu Ile Lys Tyr Asn Leu Pro Lys Trp
    130   135   140
Ala Ser Ile Leu Ile Val Ala Ile Cys Ser Ser Ser Leu Phe Ile Tyr
145   150   155   160
Leu Asp Asn Trp Trp Ile Val Phe Phe Ile Phe Val Ala Gln Phe Ile
            165   170   175
Leu Ser Leu Ser Tyr Glu Tyr Thr Arg Arg Ile Ala Thr Thr Thr Ile
        180   185   190
Gly Gln Ile Val Ala Ile Ile Leu Leu Leu Ile Phe His Gly

195   200   205

<210> 5721
<211> 573
<212> PRT
<213> S.epidermidis

<400> 5721
Thr Lys Leu Thr Arg Cys Leu Met Tyr Lys Asp Tyr Asn Met Thr Gln
1   5   10   15
Leu Thr Leu Pro Met Glu Thr Ser Val Leu Ile Pro Thr Asn Asp Ile
            20   25   30
Ser Arg His Val Asn Asp Ile Val Glu Thr Ile Pro Glu Thr Glu Phe
        35   40   45
Asp Glu Phe Arg His His Arg Gly Ala Thr Ser Tyr His Pro Lys Met
    50   55   60
Met Leu Lys Val Val Leu Tyr Ala Tyr Thr Gln Ser Val Phe Ser Gly
65   70   75   80
Arg Lys Ile Glu Lys Leu Leu Asn Asp Ser Ile Arg Met Met Trp Leu
                85   90   95
Ser Gln Asn Gln Lys Pro Ser Tyr Lys Thr Ile Asn Arg Phe Arg Val
            100   105   110
Asn Pro Lys Val Asp Ala Leu Leu Glu Ser Leu Phe Ile Gln Phe His
        115   120   125
Ser Gln Cys Leu Lys Gln Asn Leu Ile Asp Asp Gln Ala Ile Phe Ile
    130   135   140
Asp Gly Thr Lys Val Glu Ala Asn Ala Asn Arg Tyr Thr Phe Val Trp
145   150   155   160
Lys Lys Ser Ile Gln Asn His Glu Ser Arg Met Asn Glu Asn Ser Lys
                165   170   175
Ala Leu Tyr His Glu Leu Val Ile Asn Lys Ile Ile Pro Glu Ile Lys
            180   185   190
Lys Asp His Asp Asn Asp Leu Thr Lys Glu Glu Ile Asp Leu Ile Gly
            195   200   205
Ser His Leu Asp Lys Glu Ile Glu Asp Leu Asn Gln His Ile Asp Asn
    210   215   220
Glu Lys Cys Thr Lys Ile Arg Lys Gln Ile Arg Leu Lys Arg Thr Lys
225   230   235   240
Ile Lys Lys Tyr Lys Lys Gln Ile Asn Asp Tyr Ser Gln Arg Lys His
            245   250   255
Lys Tyr Glu Val Gln Lys Ser Ile Leu Lys Asp Arg Asn Ser Tyr Ser
            260   265   270
Lys Thr Asp His Asp Ala Thr Phe Met Arg Met Lys Glu Asp His Met
    275   280   285
Lys Asn Gly Gln Leu Lys Pro Gly Tyr Asn Leu Gln Ile Ala Thr Asn
    290   295   300
Ser Gln Phe Val Leu Phe Tyr Asp Val Tyr Gln Asn Pro Thr Asp Thr
305   310   315   320
Arg Thr Met Ile Pro Phe Leu Asn Thr Ile Gln Glu Thr Tyr Gly His
            325   330   335
Leu Pro Glu Tyr Ile Val Ala Asp Ala Gly Tyr Gly Ser Glu Ala Asn
            340   345   350
Tyr Met Ala Ile Ile Asp Asn Phe Asn Arg Thr Pro Leu Ile Thr Tyr
    355   360   365
Gly Met Phe Ile Lys Asp Lys Thr Lys Lys Tyr Lys Ser Asp Ile Phe
    370   375   380

Asn Thr Gln Asn Trp Asp Tyr Asp Glu Ile Asn Asp Glu Phe Ile Cys
385   390   395   400
Pro Asn Asn Lys Arg Leu Gly Phe Lys Arg Tyr Ala Tyr Arg His Asp
            405   410   415
Lys Tyr Gly Phe Lys Arg Asp Phe Lys Leu Tyr Glu Cys Asp Asp Cys
            420   425   430
Ser Glu Cys Pro Leu Lys Gln Gln Cys Met Asn Phe Asn Ser Lys Thr
        435   440   445
Asn Lys Lys Ile Met Lys Asn Tyr Asn Trp Glu Tyr Phe Lys Ala Gln
    450   455   460
Ile Asn Lys Lys Leu Ser Glu Pro Lys Thr Lys Thr Ile Tyr Ser Gln
465   470   475   480
Arg Lys Ile Asp Val Glu Pro Val Phe Gly Phe Met Lys Ala Ile Leu
            485   490   495
Gly Phe Thr Arg Met Ser Val Arg Gly Ile Asp Lys Ala Lys Arg Glu
        500   505   510
Leu Gly Phe Val Leu Met Ala Leu Asn Ile Arg Lys Val Thr Ala Gln
        515   520   525
Arg Ala Glu Asn Asn Gln Lys Asn Asn Lys Lys Asp Asn Phe Tyr Ile
    530   535   540
Ile Ser Ile Glu Ile Val Phe Phe Tyr Leu Ser Trp Asp Phe Met Ser
545   550   555   560
His Thr His Tyr Glu Gln Lys Glu Ile Cys Phe Asn Lys
            565   570

<210> 5722
<211> 50
<212> PRT
<213> S.epidermidis

<400> 5722
Asn Lys Leu Thr Lys Phe Leu Met Tyr Lys Asp Tyr Asn Lys Thr Gln
1   5   10   15
Leu Thr Leu Pro Ile Glu Thr Ser Val Leu Ile Pro Thr Asn Asp Ile
            20   25   30
His Asp Met Tyr Leu Thr His Ser Phe Phe Gly Asp Glu Leu Ile Met
        35   40   45
Asn Leu
    50

<210> 5723
<211> 451
<212> PRT
<213> S.epidermidis

<400> 5723
Val Leu Ile Thr Gly Gly Asn Lys Met Thr His Ile Gln Leu Asp Tyr
1   5   10   15
Gly Lys Thr Leu Glu Phe Phe Asp Lys His Glu Leu Asp Gln Gln Lys
            20   25   30
Asp Ile Val Lys Thr Ile His Gln Thr Ile His Lys Gly Thr Gly Ala
        35   40   45
Gly Asn Asp Phe Leu Gly Trp Leu Asp Leu Pro Val Asp Tyr Asp Lys
    50   55   60
Glu Glu Phe Ser Arg Ile Val Glu Ala Ser Lys Arg Ile Lys Ser Asn
65   70   75   80

```
Ser Asp Val Leu Val Val Ile Gly Ile Gly Gly Ser Tyr Leu Gly Ala
              85                    90                    95
Arg Ala Ala Ile Glu Met Leu Thr Ser Ser Phe Arg Thr Asn Thr Glu
            100                   105                   110
Tyr Pro Glu Ile Val Phe Val Gly Asn His Leu Ser Ser Ser Tyr Thr
            115                   120                   125
Lys Glu Leu Leu Asp Tyr Leu Gln Gly Lys Asp Phe Ser Val Asn Val
        130                   135                   140
Ile Ser Lys Ser Gly Thr Thr Thr Glu Pro Ala Val Ala Phe Arg Leu
145                   150                   155                   160
Phe Lys Gln Leu Val Glu Glu Lys Tyr Gly Lys Asp Glu Ala Lys Lys
                165                   170                   175
Arg Ile Tyr Ala Thr Thr Asp Lys Ser Lys Gly Ala Leu Lys Gln Leu
            180                   185                   190
Ala Asp Asn Glu Gly Tyr Glu Thr Phe Val Val Pro Asp Asp Val Gly
            195                   200                   205
Gly Arg Tyr Ser Val Leu Thr Ala Val Gly Leu Leu Pro Ile Ala Thr
        210                   215                   220
Ala Gly Ile Asn Ile Glu Ser Ile Met Ile Gly Ala Ala Lys Ala Arg
225                   230                   235                   240
Glu Glu Leu Ser Ser Asp Asp Leu Asp Gln Asn Ile Ala Tyr Gln Tyr
                245                   250                   255
Ala Thr Ile Arg Asn Ile Leu Tyr Ser Lys Gly Tyr Thr Thr Glu Met
            260                   265                   270
Leu Ile Asn Tyr Glu Pro Ser Met Gln Tyr Phe Asn Glu Trp Trp Lys
            275                   280                   285
Gln Leu Tyr Gly Glu Ser Glu Gly Lys Asp Phe Lys Gly Ile Tyr Pro
        290                   295                   300
Ser Ser Ala Asn Tyr Thr Thr Asp Leu His Ser Leu Gly Gln Tyr Val
305                   310                   315                   320
Gln Glu Gly Arg Arg Phe Leu Phe Glu Thr Val Val Lys Val Asn His
                325                   330                   335
Pro Lys His Asp Ile Lys Ile Glu Glu Asp Ala Asp Asp Leu Asp Gly
            340                   345                   350
Leu Asn Tyr Leu Ala Gly Lys Ser Ile Asp Glu Val Asn Thr Lys Ala
            355                   360                   365
Phe Glu Gly Thr Leu Leu Ala His Thr Asp Gly Gly Val Pro Asn Ile
        370                   375                   380
Val Val Asn Ile Pro Gln Leu Asp Glu Glu Thr Phe Gly Tyr Val Val
385                   390                   395                   400
Tyr Phe Phe Glu Leu Ala Cys Ala Met Ser Gly Tyr Gln Leu Gly Val
                405                   410                   415
Asn Pro Phe Asn Gln Pro Gly Val Glu Ala Tyr Lys Gln Asn Met Phe
            420                   425                   430
Ala Leu Leu Gly Lys Pro Gly Phe Glu Asp Lys Lys Lys Glu Leu Glu
            435                   440                   445
Asn Arg Leu
        450
```

<210> 5724
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5724
Asn Glu Lys Thr Ser Met Lys Leu Ile Cys Ile Arg Ala Cys Tyr Lys

```
1                   5                   10                  15
Phe Lys Ser Ile Ile Ser Ile Asp Thr Ile Val Leu Thr Leu Gln Gly
            20                  25                  30
Ser Ile Gly Leu Cys Arg Ser Leu Lys
        35                  40
```

<210> 5725
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5725
```
Thr Leu Glu Thr Leu Tyr Gln Thr Val Lys Ile Glu Glu Leu Asp Glu
1                   5                   10                  15
Phe Ile Phe Ile Ile Phe Asn Gln Leu Phe Ser His Pro Arg Phe Phe
            20                  25                  30
Gln Tyr Lys Asn Val Glu His His Asn Lys Lys Phe Tyr Thr Ser Lys
        35                  40                  45
Asp Leu Ala Leu Ser Val Ile
    50                  55
```

<210> 5726
<211> 54
<212> PRT
<213> S.epidermidis

<400> 5726
```
Lys Leu Met Thr Val Phe Gln Phe Lys Ile Cys Gly Thr Leu Ile Leu
1                   5                   10                  15
Asn Lys Cys Lys Cys Ser Val Tyr Phe Phe Asn Ile Thr Leu Glu Lys
            20                  25                  30
Phe Asn Lys Ile Asp Ile Ile Ile Leu Val Leu Asp Arg Asp Arg Leu
        35                  40                  45
Ile Ile Ile Tyr Pro Gln
    50
```

<210> 5727
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5727
```
Leu Thr Lys Thr Lys Leu Leu Glu Arg Tyr Arg Ser Asp Ile Gly Leu
1                   5                   10                  15
Ser Val Asn Leu Asn Leu Thr Leu Ile Gln Ile Thr Leu Lys Ile Lys
            20                  25                  30
Tyr Gln Ser Thr Leu Glu Ile Ser Ile His Ala Phe
        35                  40
```

<210> 5728
<211> 340
<212> PRT
<213> S.epidermidis

<400> 5728
```
Lys Arg Arg Ala Phe Met Thr Ala Ile Lys Asp Arg Asp Tyr Phe Phe
```

```
1                   5                       10                      15
Asp Asn Ala Arg Ala Ile Leu Ile Phe Leu Val Val Leu Gly His Leu
          20                      25                      30
Leu Gln Pro Tyr Thr Ser Glu Asp Lys Phe Leu Gln Ala Leu Tyr Leu
          35                      40                      45
Leu Ile Tyr Ser Phe His Met Pro Thr Phe Leu Phe Ile Ser Gly Tyr
      50                      55                      60
Phe Ala Lys Asn Leu Asp Lys Pro Asn Tyr Leu Glu Lys Ile Ala Lys
65                      70                      75                      80
Lys Leu Leu Leu Pro Tyr Val Ile Phe Phe Ala Phe Phe Ser Leu Tyr
              85                      90                      95
Tyr Tyr Phe Thr Gly Lys Glu Asp Ala Ile Gln Leu Asp Pro Phe Asn
              100                     105                     110
Pro Val Phe Ala Leu Trp Phe Leu Leu Thr Leu Phe Phe Phe His Val
          115                     120                     125
Val Leu Val Ile Val Arg Arg Tyr Asn Pro Tyr Ile Val Leu Phe Ile
      130                     135                     140
Ser Ile Leu Val Ser Val Leu Ala Gly Phe Ser Gly Asn Ile Asp Ser
145                     150                     155                     160
Tyr Met Ser Ile Ser Arg Thr Ile Val Phe Phe Pro Ile Phe Phe Ile
              165                     170                     175
Gly His Leu Val Thr Gln Ser His Thr Glu Lys Leu Arg Asn Lys Lys
              180                     185                     190
Trp Ile Pro Ile Ser Ile Ile Ile Leu Ile Thr Phe Phe Ile Gly Tyr
          195                     200                     205
Thr Ile His Pro Ile Asn Gly Asp Trp Leu Leu Gly Ser Thr Pro Tyr
      210                     215                     220
Thr Ser Leu Glu Ser Asn Gly Glu Asp Val Tyr Ser Pro Leu Lys Arg
225                     230                     235                     240
Leu Leu Leu Tyr Ile Ile Ile Leu Leu Thr Met Cys Ala Phe Leu Asn
              245                     250                     255
Leu Met Pro Gln Thr Lys Arg Ile Tyr Thr Tyr Ile Gly Gln Arg Thr
              260                     265                     270
Met Phe Val Tyr Leu Leu His Gly Ile Val Ile Gly Val Ile Arg Gly
          275                     280                     285
Phe Asp Leu Tyr Pro Phe Lys Asp Gln Ile Ser Ile Phe Thr Tyr Leu
      290                     295                     300
Tyr Leu Phe Ile Ser Ala Ser Val Ile Val Leu Ile Leu Ser Ser Lys
305                     310                     315                     320
Trp Val Cys Lys Trp Thr Asn Pro Phe Ile Asn Leu Lys Arg Pro Ser
              325                     330                     335
Gln Phe Lys Asn
              340


<210> 5729
<211> 267
<212> PRT
<213> S.epidermidis


<400> 5729
Lys Tyr Met Ala Glu Glu Leu Arg Ile Met Glu Asn Lys Ser Arg Glu
1                   5                       10                      15
Asp Thr Asn Leu Ser Pro Val Ser Lys Ile Glu Ile Tyr Ser Phe Phe
          20                      25                      30
Asp Pro Phe Ser Lys Asp Cys Phe Lys Leu Ser Ala Ile Leu Ser Lys
          35                      40                      45
```

```
Leu Arg Ile Glu Tyr Asn Lys Tyr Ile Lys Ile Arg His Ile Leu Asn
    50                  55                  60
Pro Ser Leu Lys Val Leu Thr Lys Cys Gln Ala Gln Ser Thr Ser Asp
65                  70                  75                  80
Phe Asp Asn Ile Ala Leu Ala Tyr Lys Ala Ala Glu Leu Gln Gly Arg
                85                  90                  95
Ile Arg Ala Glu Arg Phe Ile His Leu Met Gln Asn Glu Ile Ile Pro
            100                 105                 110
Lys Arg Asp Ile Ile Thr Glu Asp Met Ile Ser Asp Cys Ile Asn Asn
            115                 120                 125
Ala Gly Ile Asp Tyr Gln Val Phe Lys Glu Asp Leu Gln Lys Asp Lys
        130                 135                 140
Leu Thr Asp Ser Leu Lys Val Asp Leu His Ile Ala Arg Glu Met Glu
145                 150                 155                 160
Ile Glu Gln Ala Pro Ser Leu Val Phe Phe Ser Glu Asn Val His Glu
                165                 170                 175
Glu Gly Leu Lys Val Glu Gly Leu Tyr Pro Tyr His Ile Tyr Thr Tyr
                180                 185                 190
Ile Ile Asn Glu Leu Met Gly Gln Pro Ile Glu Lys Asn Leu Pro Pro
            195                 200                 205
Lys Leu Glu Tyr Tyr Ile Gln Lys Lys Gln Leu Val Thr Met Glu Glu
        210                 215                 220
Leu Leu Thr Ile Tyr Glu Trp Pro Glu Lys Leu Leu Asn Lys Glu Leu
225                 230                 235                 240
Lys Lys Leu Thr Leu Gln Gln Lys Val Glu Lys Leu Gln Tyr Pro Glu
                245                 250                 255
Gly Glu Phe Trp Lys Ser Lys Met Pro Gln Cys
            260                 265
```

<210> 5730
<211> 75
<212> PRT
<213> S.epidermidis

<400> 5730
```
Ala Leu Asn Phe Val Arg Lys Gly Asp Arg Phe Val Val Glu Ser Ile
1                   5                   10                  15
Asp Arg Leu Gly Arg Asn Tyr Asp Glu Val Ile His Thr Val Asn Tyr
                20                  25                  30
Leu Lys Asp Lys Glu Val Gln Leu Met Ile Thr Ser Phe Pro Arg Met
            35                  40                  45
Asp Glu Val Ile Gly Lys Pro Leu Leu Tyr Ile Glu Ser His Ala Leu
        50                  55                  60
Cys Val Trp Phe Arg Lys Gly Phe Thr Val Ile
65                  70                  75
```

<210> 5731
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5731
```
Ile Gln Asn Phe Phe Glu Gln Ala Lys Glu Phe Leu Glu Gln Glu Tyr
1                   5                   10                  15
Gly Lys Asp Asn Leu Leu Tyr Ala Lys Leu His Met Asp Lys Arg Leu
                20                  25                  30
```

Thr Cys Thr Leu Lys Leu Tyr Gln Leu Gln Lys Met Asp Asp
        35   40   45

<210> 5732
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5732
Leu Val Phe Tyr Cys Tyr Pro Leu Glu Asp His Ser Tyr Ser Phe Phe
1   5   10   15
Asn Ser Phe Phe Ile Cys Lys Ile Gln Val Ile Leu Ile Leu Tyr Ile
            20   25   30
Ile Ile Ile Leu Asn Ser Phe Ile Ile
            35   40

<210> 5733
<211> 123
<212> PRT
<213> S.epidermidis

<400> 5733
Glu Ala Leu Tyr Phe Gly Ala Thr Gly Val Leu Ser Tyr Arg Lys Phe
1   5   10   15
Phe Pro Phe Ile Tyr Asn Leu Phe Gln Lys Gly Tyr Phe Glu Asn Ser
            20   25   30
Leu Thr Ile Ile Gly Ser Gly Leu Asn Glu Leu Thr Thr Asp Glu Phe
            35   40   45
Arg Glu Lys Val Lys Asn Ala Ile Gln Asn Asn Ile Glu Asn Ser Lys
        50   55   60
Glu Ile Gly Ala Phe Leu Lys Arg Leu Phe Tyr Lys Gln Gln Asp Ala
65   70   75   80
Asn Ser Lys Asp Ser Tyr Gln Lys Phe Leu Glu Met Ser Leu Glu Leu
            85   90   95
Asp Asp Lys Phe Asp Leu Lys Glu Asn Arg Leu Phe Tyr Leu Ala Met
            100   105   110
Ser Pro Lys Phe Leu Glu Leu Gln Gln Thr Thr
            115   120

<210> 5734
<211> 52
<212> PRT
<213> S.epidermidis

<400> 5734
Val Thr Ile Tyr Ser His Pro Pro Leu Ile Phe Lys Ile Tyr Asn Asn
1   5   10   15
Cys Asn Val Phe Ser Cys Ile Val Lys Gly Lys Glu Val Tyr His Leu
            20   25   30
Leu Tyr Leu Asn Thr Ile Asn Lys Ala Tyr Asn Thr Met Leu Cys Arg
            35   40   45
Lys Phe Ala Leu
    50

<210> 5735
<211> 301

```
<212> PRT
<213> S.epidermidis

<400> 5735
Met Lys Phe Leu Ser Phe Lys His Asn Asp Arg Thr Ser Tyr Gly Val
1               5                   10                  15
Lys Val Lys Arg Glu Asp Ala Val Trp Asp Leu Pro Met Val Phe Ala
            20                  25                  30
Glu Phe Gly Asp Lys Asp Phe Asn Pro Lys Thr Leu Ile Ala Gly Leu
            35                  40                  45
Gln Gln Asn Gln Thr Leu Asp Phe Gln Glu Gln Val Arg Lys Ala Val
        50                  55                  60
Val Ala Ala Glu Glu Ser Gly Arg Asp Glu Glu Phe Lys Leu Leu Phe
65                  70                  75                  80
Thr Asp Ile Asp Phe Leu Pro Pro Val Thr Pro Pro Asn Asn Val Ile
                85                  90                  95
Ala Phe Gly Arg Asn Tyr Glu Asp His Ala Ser Glu Leu Asn His Glu
            100                 105                 110
Val Asp Ser Leu Tyr Val Phe Thr Lys Ala Ala Ser Ser Leu Thr Gly
        115                 120                 125
Asp Glu Ala Thr Ile Pro Asn His Lys Asp Ile Thr Glu Gln Leu Asp
    130                 135                 140
Tyr Glu Gly Glu Leu Gly Ile Val Ile Gly Lys Ser Gly Glu Lys Ile
145                 150                 155                 160
Pro Arg Gly Leu Ala Leu Asp Tyr Ile Tyr Gly Tyr Thr Ile Ile Asn
            165                 170                 175
Asp Ile Thr Asp Arg Thr Ala Gln Ser Ser His Asp Gln Ala Phe Leu
            180                 185                 190
Ser Lys Ser Leu Thr Gly Ala Cys Pro Met Gly Pro Tyr Ile Val Thr
            195                 200                 205
Lys Asp Glu Leu Pro Ala Pro Glu Asn Val Asn Ile Val Thr Lys Val
    210                 215                 220
Asn Asn Glu Ile Arg Gln Asp Gly Asn Thr Gly Glu Met Ile Leu Lys
225                 230                 235                 240
Ile Asp Glu Leu Ile Glu Lys Ile Ser Lys Tyr Val Ala Leu His Pro
            245                 250                 255
Gly Asp Ile Ile Ala Thr Gly Thr Pro Ala Gly Val Gly Ala Gly Leu
            260                 265                 270
Gln Pro Pro Gln Phe Leu Gln Pro Gly Asp Glu Val Lys Val Thr Ile
            275                 280                 285
Asp Asn Ile Gly Thr Leu Thr Thr Tyr Ile Ser Lys Asn
    290                 295                 300

<210> 5736
<211> 81
<212> PRT
<213> S.epidermidis

<400> 5736
Arg Ala Ser Tyr Ser Val Glu Thr Lys Tyr Lys Ala Val Glu Met Lys
1               5                   10                  15
Ala Ala Glu Phe Ser Thr Lys Glu Ile Met Lys Glu Leu Asn Ile Arg
            20                  25                  30
Asn Arg Thr Gln Val Lys Ser Trp Trp Leu Trp Tyr Gln Asn Glu Glu
        35                  40                  45
Ser Met Phe Val Leu Tyr Leu Tyr Pro Gln Ser Leu Ile Ile Cys Leu
```

```
        50                      55                      60
Ser Leu His Phe Ser Thr Asn Gln Cys Tyr Asn Leu Asp Asn Glu Asn
65              .           70                  75                      80
Asp
```

<210> 5737
<211> 270
<212> PRT
<213> S.epidermidis

<400> 5737
```
Ile Met Arg Tyr Thr Ile Leu Thr Lys Gly Asp Ser Lys Ser Asn Ala
1           .           5                   10                      15
Leu Lys His Lys Met Ile Asn His Met Lys Asp Phe Gln Met Val Glu
                20                  25                  30
Asp Ser Glu Asn Pro Glu Ile Val Ile Ser Val Gly Gly Asp Gly Thr
            35              .       40                  45
Leu Leu Gln Ala Phe His Gln Tyr Ser His Met Leu Ser Lys Val Ala
        50                  55                  60
Phe Val Gly Ile His Thr Gly His Leu Gly Phe Tyr Ala Asp Trp Leu
65                  70                  75                      80
Pro His Glu Val Glu Lys Leu Ile Ile Glu Ile Asn Asn Ser Glu Phe
                85                  90                  95
Gln Val Ile Glu Tyr Pro Leu Leu Glu Leu Ile Val Arg Tyr Asn Asp
                100                 105                 110
Asn Gly Tyr Glu Thr Arg Tyr Leu Ala Leu Asn Glu Ala Thr Met Lys
            115                 120                 125
Thr Glu Asn Gly Ser Thr Leu Val Val Asp Val Asn Ile Arg Gly Lys
        130                 135                 140
His Phe Glu Arg Phe Arg Gly Asp Gly Leu Cys Ile Ser Thr Pro Ser
145                 150                 155                 160
Gly Ser Thr Ala Tyr Asn Lys Ala Leu Gly Gly Ala Leu Ile His Pro
                165                 170                 175
Ser Leu Glu Ala Met Gln Ile Ala Glu Ile Ala Ser Ile Asn Asn Arg
            180                 185                 190
Val Phe Arg Thr Val Gly Ser Pro Leu Val Leu Pro Lys His His Thr
            195                 200                 205
Cys Leu Ile Thr Pro Val Asn His Asp Thr Ile Arg Thr Thr Ile Asp
        210                 215                 220
His Val Ser Ile Lys His Lys Asn Val Asn Ala Ile Gln Tyr Arg Val
225                 230                 235                 240
Ala Asn Glu Lys Val Arg Phe Ala Arg Phe Arg Pro Phe Pro Phe Trp
                245             .       250                 255
Lys Arg Val His Asp Ser Phe Ile Ser Ser Asp Asp Glu Arg
                260                 265                 270
```

<210> 5738
<211> 333
<212> PRT
<213> S.epidermidis

<400> 5738
```
Lys His Glu Tyr Val Lys Leu Ile Pro Gly Ile Lys Asn Phe Leu Arg
1                   5                   10                      15
Arg Cys Thr Thr Met Asn Val Gly Ile Lys Gly Phe Gly Ala Tyr Ala
```

```
                20                      25                      30
Pro Lys Asn Ile Ile Asp Asn Ala Tyr Phe Glu Gln Phe Leu Glu Thr
            35                      40                      45
Ser Asp Glu Trp Ile Ser Lys Met Thr Gly Ile Lys Glu Arg His Trp
        50                      55                      60
Ala Asp Glu Asp Gln Asp Thr Ser Asp Leu Ala Tyr Asn Ala Ser Ile
65                      70                      75                      80
Lys Ala Ile Glu Asp Ala Gly Ile Gln Pro Val Asp Ile Asp Met Ile
                85                      90                      95
Ile Val Ala Thr Ala Thr Gly Asp Met Pro Phe Pro Ser Val Ala Asn
            100                     105                     110
Ile Leu Gln Glu Arg Leu Gly Thr Gly Lys Val Ala Thr Met Asp Gln
            115                     120                     125
Leu Ala Ala Cys Ser Gly Phe Met Tyr Ser Met Ile Thr Ala Lys Gln
        130                     135                     140
Tyr Ile Gln Ser Gly Asp Tyr Lys His Ile Leu Val Val Gly Ala Asp
145                     150                     155                     160
Lys Leu Ser Lys Ile Thr Asp Met Thr Asp Arg Ser Thr Ala Val Leu
                165                     170                     175
Phe Gly Asp Gly Ala Gly Ala Val Val Met Gly Glu Val Ala Glu Gly
            180                     185                     190
Arg Gly Ile Ile Ser Tyr Glu Met Gly Ser Asp Gly Ser Gly Gly Lys
            195                     200                     205
Tyr Leu Tyr Leu Asp Arg Glu Thr Gly Lys Leu Lys Met Asn Gly Arg
        210                     215                     220
Glu Val Phe Lys Phe Ala Val Arg Ile Met Gly Asp Ala Ser Thr Arg
225                     230                     235                     240
Val Val Glu Lys Ala Gly Leu Ser Ser Glu Asp Ile Asp Leu Phe Val
                245                     250                     255
Pro His Gln Ala Asn Ile Arg Ile Met Glu Ser Ala Arg Glu Arg Leu
            260                     265                     270
Gly Ile Glu Arg Glu Lys Met Ser Val Ser Val Asn Lys Tyr Gly Asn
            275                     280                     285
Thr Ser Ala Ala Ser Ile Pro Leu Ser Ile Asn Gln Glu Leu Gln Asn
        290                     295                     300
Gly Lys Ile Lys Asp Asp Asp Thr Leu Val Leu Val Gly Phe Gly Gly
305                     310                     315                     320
Gly Leu Thr Trp Gly Ala Ile Val Ile Lys Trp Gly Lys
                325                     330
```

```
<210> 5739
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5739
Ile Thr Arg Tyr Asn Lys Thr Pro Ser Asn Gln Arg Phe Val Leu Arg
1               5                       10                      15
Asp Leu Thr Arg Tyr Lys Gln Ile Thr Glu Thr Glu Gly Phe Glu Pro
            20                      25                      30
Ser Arg Arg Ser Arg Asp Leu His Pro
        35                      40

<210> 5740
<211> 141
<212> PRT
```

<213> S.epidermidis

<400> 5740
Asn Asn Met Tyr Lys Gln Leu Glu Lys Leu Ile Thr Leu Thr Asn Asn
1   5   10   15
Asp Leu Asn Leu Val Asn Arg Arg Phe Gly Gln Arg Thr Asp Ile Thr
            20   25   30
Ser Glu Gln Leu Glu Leu Leu Arg Ile Leu Tyr Asn Tyr Asp Arg Leu
        35   40   45
Ser Gln Tyr Asp Leu Thr Met Lys Ile Ser Arg Glu Gln Ser Ile Val
        50   55   60
Ser Arg Trp Ile Lys Lys Leu Val Gln Lys Gly Tyr Ile Met Ser Gln
65   70   75   80
Gln Ser His Glu Asp Leu Arg Cys Lys Glu Leu Ile Leu Thr Glu Glu
                85   90   95
Ala Arg Ala Leu Ile Gln Gln Ile Asn Thr Ala Arg Cys Glu Leu Ile
            100   105   110
Glu Ala Arg Cys Gln Cys Leu Ser Ser Asp Glu Ile Ala Ser Leu Asn
            115   120   125
Gln Leu Leu Asn Lys Leu Asn Ser Arg His Ile Phe Ile
        130   135   140

<210> 5741
<211> 412
<212> PRT
<213> S.epidermidis

<400> 5741
Val Thr His Leu Asn Arg Met Lys Ser Met Glu Arg Phe Leu Cys Met
1   5   10   15
Gln Asp Ser Ser Ser Ser Asn Tyr Ser Ser Asn Arg Asn Phe Val Met
            20   25   30
Met Leu Val Ile Leu Phe Leu Met Glu Phe Ala Arg Gly Met Tyr Ile
            35   40   45
Leu Ser Tyr Ile Asn Phe Leu Pro Thr Val Thr Ser Ile Ala Ile Ala
        50   55   60
Ile Thr Ser Phe Ala Phe Ser Ile His Phe Ile Ala Asp Ala Ala Thr
65   70   75   80
Asn Phe Val Ile Gly Phe Leu Leu Lys Lys Phe Gly Ser Lys Leu Val
                85   90   95
Leu Thr Ser Gly Phe Leu Leu Ala Phe Ile Ser Leu Phe Leu Val Ile
            100   105   110
Trp Phe Pro Ala Ser Pro Phe Ile Ile Ile Phe Ser Ala Ile Met Leu
            115   120   125
Gly Ile Ala Val Ser Pro Ile Trp Val Ile Met Leu Ser Ser Val Asp
        130   135   140
Glu Arg Asn Arg Gly Lys Gln Met Gly Tyr Val Tyr Phe Ser Trp Leu
145   150   155   160
Leu Gly Leu Leu Val Gly Met Val Ile Met Asn Leu Leu Ile Lys Phe
                165   170   175
His Pro Thr Arg Phe Ala Phe Leu Met Ala Leu Val Val Leu Ile Ala
            180   185   190
Trp Val Leu Tyr Tyr Phe Val Asn Ile Asn Leu Thr Asn Tyr Asn Thr
            195   200   205
Lys Pro Val Lys Ala Gln Leu Lys Gln Ile Val Asp Val Thr Gln Arg
        210   215   220

```
His Leu Ile Leu Phe Pro Gly Ile Leu Leu Gln Gly Ala Ala Ile Ala
225                 230                 235                 240
Ala Leu Val Pro Ile Leu Pro Lys Tyr Ala Thr Gln Val Val Lys Val
                245             250                 255
Ser Thr Val Gly Tyr Thr Val Ala Ile Ile Ile Gly Gly Ile Gly Cys
                260             265                 270
Ala Phe Ser Met Leu Phe Leu Ser Lys Ile Ile Asp Asn Asn Ser Lys
        275             280             285
Gly Phe Met Tyr Gly Val Ile Phe Ser Gly Phe Ile Leu Tyr Thr Ile
        290             295             300
Leu Ile Phe Gly Leu Ser Thr Ile Thr Asn Ile Tyr Ile Val Trp Ala
305             310             315                 320
Ile Gly Leu Phe Ile Gly Leu Met Tyr Gly Ile Leu Leu Pro Ala Trp
                325             330                 335
Asn Thr Phe Met Ala Gly His Ile Asn Pro Asn Glu Gln Glu Glu Thr
            340             345             350
Trp Gly Val Phe Asn Ser Val Gln Gly Phe Gly Ser Met Ile Gly Pro
        355             360             365
Leu Val Gly Gly Leu Ile Thr Gln Phe Thr Asn Asn Leu Asn Asn Thr
        370             375             380
Phe Tyr Phe Ser Ala Met Ile Phe Leu Ala Leu Ala Val Phe Tyr Gly
385             390             395                 400
Tyr Tyr Phe Ile Lys Thr Asn Arg Arg Val Lys Pro
                405             410
```

<210> 5742
<211> 70
<212> PRT
<213> S.epidermidis

<400> 5742
```
Lys Leu Ser Gln Ala Ser Pro Lys Leu Trp Phe Asn Trp Ser Arg Ile
1               5               10                  15
Ser Lys Thr Ser Thr Lys Ser Arg Lys Ser Ile Ile Lys Arg Gln Arg
            20              25              30
Ile Lys Ile Val Ile Lys Asn Asn Ser His Leu Lys Leu Gln Lys Phe
        35              40              45
Asn Phe Val Leu Ser Tyr Gln Ser Leu Tyr Lys Lys Asn Val Lys Phe
    50              55              60
Pro Phe Ile Leu Ser Asn
65                  70
```

<210> 5743
<211> 391
<212> PRT
<213> S.epidermidis

<400> 5743
```
Met Val Thr Gln Asn Lys Lys Ile Leu Ile Ile Thr Gly Ser Phe Gly
1               5               10                  15
Asn Gly His Met Gln Val Thr Gln Ser Ile Val Asn Gln Leu Asn Glu
            20              25              30
Met Asn Leu Asn His Leu Ser Val Ile Gln His Asp Leu Phe Met Glu
        35              40              45
Ala His Pro Ile Met Thr Ser Ile Cys Lys Lys Trp Tyr Ile Asn Ser
    50              55              60
```

```
Phe Lys Tyr Phe Arg Asn Thr Tyr Lys Arg Phe Tyr Tyr Ser Arg Pro
65                  70                  75                  80
Asn Glu Leu Asp Lys Cys Phe Tyr Lys Tyr Tyr Gly Leu Asn Lys Leu
                85                  90                  95
Ile Asn Leu Leu Ile Lys Glu Lys Pro Asp Leu Ile Leu Leu Thr Phe
            100                 105                 110
Pro Thr Pro Val Met Ser Val Leu Thr Glu Gln Phe Asn Ile Asn Ile
        115                 120                 125
Pro Ile Ala Thr Val Met Thr Asp Tyr Arg Met His Lys Asn Trp Ile
    130                 135                 140
Thr Pro Tyr Ser Gln Arg Tyr Tyr Val Ala Thr Lys Asp Thr Lys Asp
145                 150                 155                 160
Asp Phe Ile Glu Ala Gly Val Pro Ala Ser Tyr Ile Lys Val Thr Gly
            165                 170                 175
Ile Pro Ile Ala Asp Lys Phe Glu Glu Ser Ile Asp Lys Glu Glu Trp
            180                 185                 190
Leu Ser Gln Gln His Leu Asp Pro Ser Lys Pro Thr Ile Leu Met Ser
        195                 200                 205
Ala Gly Ala Phe Gly Val Ser Lys Gly Phe Asp Tyr Met Ile Asn Asn
    210                 215                 220
Ile Leu Glu Lys Ser Pro Asn Ser Gln Val Val Met Ile Cys Gly Arg
225                 230                 235                 240
Ser Lys Glu Leu Lys Arg Ser Leu Lys Ala Lys Phe Lys Asp Asn Pro
            245                 250                 255
Ser Val Ile Ile Leu Gly Tyr Thr Asn His Met Asn Glu Trp Met Ala
            260                 265                 270
Ser Ser Gln Leu Met Ile Thr Lys Pro Gly Gly Ile Thr Ile Ser Glu
        275                 280                 285
Gly Leu Ser Arg Cys Ile Pro Met Ile Phe Leu Asn Pro Ala Pro Gly
    290                 295                 300
Gln Glu Leu Glu Asn Ala Tyr Tyr Phe Glu Ser Lys Gly Phe Gly Lys
305                 310                 315                 320
Ile Ala Asp Thr Pro Asn Glu Ala Ile Asp Ile Val Ser Asp Leu Thr
            325                 330                 335
Asn Asn Glu Glu Thr Leu Lys Val Met Ser Ser Lys Met Leu Glu Ser
            340                 345                 350
Lys Val Gly Tyr Ser Thr Arg Lys Ile Cys Lys Asp Leu Leu Asp Leu
        355                 360                 365
Ile Gly His Ser Ser Gln Pro Asp Glu Ile Tyr Gly Lys Val Pro Leu
    370                 375                 380
Tyr Ala Arg Phe Phe Val Lys
385                 390
```

```
<210> 5744
<211> 397
<212> PRT
<213> S.epidermidis

<400> 5744
Phe Phe Ser His His Gly Tyr Asn Asp Ile Ile Gln Tyr Phe Ile Tyr
1               5                   10                  15
Cys Phe Asp Leu Tyr Cys Arg His Phe Ile Trp Cys Tyr Arg Ser Lys
            20                  25                  30
Asn Ser Cys Thr Arg Gly Gln Glu Ile Met Ser Asn Lys Glu Asp Val
        35                  40                  45
Thr Asn Ile Asn Gly Asp Ile Ser Asn Ala Thr Met Ser His Thr Ser
```

```
                50                          55                          60
Asn Asp Ile Ser Asn Thr Asp Phe Ile Ile Arg Asp Leu Asp Leu Asn
65                          70                          75                          80
Gln Glu Pro Glu Met Pro Arg Gln Ser Lys Asn Phe Trp Gln Asp Ala
                        85                          90                          95
Trp Ser Gln Leu Lys Arg Asn Lys Leu Ala Val Ile Gly Met Ile Gly
                    100                         105                         110
Leu Leu Leu Ile Val Ile Met Ala Phe Ile Gly Pro Leu Met Asn Lys
                115                         120                         125
His Asp Phe Ala Glu Gln Asn Val Asp His Arg Asn Leu Pro Ala Lys
                130                         135                         140
Ile Pro Leu Leu Asp His Val Ser Phe Leu Pro Phe Asp Gly Lys Gly
145                         150                         155                         160
Thr Asp Gly Lys Asn Ala Tyr Lys Glu Ala Gly Ala Lys Glu Asn Tyr
                    165                         170                         175
Trp Phe Gly Thr Asp Gln Leu Gly Arg Asp Leu Trp Thr Arg Thr Trp
                    180                         185                         190
Lys Gly Ala Gln Ile Ser Leu Tyr Ile Gly Val Val Ala Ala Leu Leu
                    195                         200                         205
Asp Ile Cys Ile Gly Val Val Tyr Gly Ala Val Ser Gly Phe Phe Gly
                210                         215                         220
Gly Arg Val Asp Asp Val Met Gln Arg Ile Leu Glu Ile Ile Ala Ser
225                         230                         235                         240
Ile Pro Asn Leu Ile Val Val Ile Leu Phe Val Leu Ile Phe Glu Pro
                    245                         250                         255
Ser Ile Trp Thr Ile Ile Leu Ala Met Ser Ile Thr Gly Trp Leu Gly
                    260                         265                         270
Met Ser Arg Val Val Arg Gly Glu Phe Leu Lys Leu Lys Asn Gln Glu
                    275                         280                         285
Phe Val Leu Ala Ser Gln Thr Leu Gly Ala Ser Lys Phe Lys Leu Ile
                    290                         295                         300
Phe Lys His Ile Leu Pro Asn Thr Leu Gly Ala Ile Val Val Thr Ser
305                         310                         315                         320
Met Phe Thr Val Pro Ser Ala Ile Phe Phe Glu Ala Phe Leu Ser Phe
                    325                         330                         335
Ile Gly Ile Gly Val Pro Ala Pro Lys Thr Ser Leu Gly Ser Leu Val
                    340                         345                         350
Asn Asp Gly Arg Ala Met Leu Leu Ile His Pro His Glu Leu Phe Ile
                    355                         360                         365
Pro Ala Ile Ile Leu Ser Leu Leu Ile Leu Phe Phe Tyr Leu Phe Ser
                    370                         375                         380
Asp Gly Leu Arg Asp Ala Phe Asp Pro Lys Met Arg Lys
385                         390                         395
```

```
<210> 5745
<211> 40
<212> PRT
<213> S.epidermidis


<400> 5745
Ala Ser Leu Gln Lys Arg Leu Gly His Ala Asn Ile Glu Ile Thr Trp
1                   5                           10                          15
Arg Val Tyr Ser His Leu Leu Lys Val Leu Lys Ser Glu Glu Val Ala
                20                          25                          30
Met Pro Asp Asn Ile Ile Tyr Phe
            35                          40
```

```
<210> 5746
<211> 48
<212> PRT
<213> S.epidermidis

<400> 5746
Asn Ile Lys Gln Asn Ile Arg Gly Val Asn Met Gln Asn Ile Ile Lys
1               5                   10                  15
Arg Val Ile Arg Ile Leu Val Ser Gly Tyr Ile Val Lys Met Ile Arg
            20                  25                  30
Asn Leu Ile Phe Lys Asn Ser Asn Asp Ser Asn Lys Asn Asn His Lys
        35                  40                  45


<210> 5747
<211> 174
<212> PRT
<213> S.epidermidis

<400> 5747
Asn Met Lys His Leu Ile Lys Tyr Leu Ile Ser Phe Thr Phe Ala Ile
1               5                   10                  15
Ile Ile Val Ile Phe Ile Gln Ser Phe Ile Ile Val Gly Ala Val Ile
            20                  25                  30
Ser Asn Asn Ser Met Thr Pro Thr Leu Gln Thr Gly Asp Arg Val Ile
        35                  40                  45
Val Asn Lys Ile Lys Val Thr Phe Asp Leu Ile Gln Arg Gly Asp Ile
    50                  55                  60
Ile Met Tyr Arg His Asn Asn Lys Thr Tyr Phe Ser Arg Ile Ile Gly
65                  70                  75                  80
Lys Pro Gly Glu Ser Val Ser Ile Lys Ser Gln Arg Ile Asn Ile Asp
                85                  90                  95
Asp Arg Gln Val Asn Glu Pro Tyr Met Lys Asp Arg His Ile Lys Asp
            100                 105                 110
Ile Thr Leu Arg Glu Ile Lys Asn Ser Asp Gly Asp Thr Ile Pro Pro
        115                 120                 125
Gly Ala Phe Phe Val Leu Asn Asp Asn Asn Asn Lys His Ser Asp Ser
    130                 135                 140
Arg Thr Tyr Gly Leu Ile Asp Lys Lys Asp Ile Ile Gly Asp Val Ser
145                 150                 155                 160
Leu Lys Tyr Tyr Pro Phe Lys Glu Phe Asn Tyr Gln Phe Lys
                165                 170


<210> 5748
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5748
Asn Met Leu Gln Pro Leu Ile His Gly Leu Leu Leu Ala Leu Gly Leu
1               5                   10                  15
Ile Leu Pro Leu Gly Ala Gln Asn Val Phe Val Phe Asn Gln Gly Ala
            20                  25                  30
Asn Gln Lys Lys Leu Val Lys His Tyr Leu
        35                  40
```

<210> 5749
<211> 317
<212> PRT
<213> S.epidermidis

<400> 5749
```
Glu Val Val His Ile Met Ser Asp Gln Tyr Gln Gln Tyr Ser Thr Val
1               5                   10                  15
Lys Lys Tyr Trp Gln Leu Met Arg Pro His Thr Leu Thr Ala Ala Val
            20                  25                  30
Val Pro Val Leu Val Gly Thr Ala Ala Ala Lys Ile Tyr Leu Leu Gly
            35                  40                  45
Ser Glu Asp His Leu Lys Phe Ser Leu Phe Leu Ala Met Leu Leu Ala
        50                  55                  60
Cys Leu Leu Ile Gln Ala Ala Thr Asn Met Phe Asn Glu Tyr Tyr Asp
65                  70                  75                  80
Phe Lys Lys Gly Leu Asp Asp His Thr Ser Val Gly Ile Gly Gly Ala
                85                  90                  95
Ile Val Arg Asn Gly Met Ser Pro Lys Gln Val Met Asn Leu Ala Ile
            100                 105                 110
Ala Phe Tyr Ile Ile Ala Ala Leu Leu Gly Ile Phe Leu Ala Ile Gln
            115                 120                 125
Ser Ser Phe Trp Ile Ile Pro Val Gly Ile Val Cys Met Ala Ile Gly
        130                 135                 140
Tyr Leu Tyr Thr Gly Gly Pro Ile Pro Ile Ser Trp Thr Pro Phe Gly
145                 150                 155                 160
Glu Leu Phe Ser Gly Leu Phe Met Gly Met Ile Ile Ile Leu Leu Ser
                165                 170                 175
Phe Phe Ile Gln Thr Gly Asn Val Gln Gly Tyr Ala Val Trp Leu Ser
            180                 185                 190
Ile Pro Ile Val Ile Thr Ile Gly Leu Ile Asn Met Gly Asn Asn Ile
            195                 200                 205
Arg Asp Arg Val Lys Asp Lys Ala Ser Gly Arg Lys Thr Leu Pro Ile
        210                 215                 220
Leu Leu Gly Lys Arg Ala Ser Val Ile Phe Met Ala Ile Met Tyr Ala
225                 230                 235                 240
Ile Ala Tyr Ile Ile Val Ile Ile Thr Ala Phe Phe Lys Pro Ala Gly
            245                 250                 255
Ser Leu Phe Tyr Leu Leu Val Leu Leu Ser Phe Pro Met Pro Ile Lys
            260                 265                 270
Ala Val Arg Arg Phe Asn Lys Asn Asp Thr Pro Glu Thr Met Met Pro
            275                 280                 285
Ala Met Ala Ala Thr Gly Lys Thr Asn Thr Phe Phe Gly Leu Leu Tyr
            290                 295                 300
Ala Leu Gly Ile Tyr Ile Ser Ala Leu Leu Gly Ala Ile
305                 310                 315
```

<210> 5750
<211> 42
<212> PRT
<213> S.epidermidis

<400> 5750
```
Met Tyr Phe Asn Leu Ile Leu Glu Lys Gly Arg Phe Leu Tyr Cys Lys
1               5                   10                  15
Ser Lys Arg Ile Lys Gln Lys Lys Ser Phe Ile Tyr Ile Tyr Tyr Ser
```

```
                20                      25                      30
Thr Val Met Gln Asn Asp Ile Ala Ile Val
        35                      40


<210> 5751
<211> 200
<212> PRT
<213> S.epidermidis

<400> 5751
Tyr Asn Pro Lys Lys Gly Phe Asp Val Leu Ser Leu Ser Gln Leu Glu
1               5                   10                  15
Glu Trp Phe Asp Ala Phe Arg Gln Phe Gly Tyr Ile Pro Gly Phe Ile
            20                  25                  30
Met Leu Tyr Leu Arg Ala Ile Val Pro Val Leu Pro Leu Thr Leu Tyr
        35                  40                  45
Val Val Leu Leu Ile His Ala Tyr Gly Leu Phe Pro Gly Ile Ile Ile
    50                  55                  60
Ser Trp Leu Gly Ile Val Ser Gly Thr Phe Thr Val Phe Leu Ile Cys
65                  70                  75                  80
Lys Lys Phe Val Asn Thr Ile Arg Met Lys Lys Leu Lys Ser Arg Lys
                85                  90                  95
Ser Val Gln Arg Leu Ile Ser Phe Ile Asp Arg Gln Gly Leu Ile Pro
            100                 105                 110
Leu Phe Val Leu Leu Cys Phe Pro Phe Thr Pro Asn Thr Leu Ile Asn
        115                 120                 125
Ile Ile Ala Ser Leu Ser His Ile Lys Ile Lys Tyr Tyr Phe Phe Val
        130                 135                 140
Leu Val Ile Ser Lys Leu Ile Ser Ile Thr Ile Leu Gly Val Met Gly
145                 150                 155                 160
Lys Glu Ile Phe Thr Ile Phe Thr Asn Pro Leu Arg Ala Leu Ile Met
                165                 170                 175
Ile Val Leu Leu Val Val Leu Trp Phe Ile Ser Lys Lys Val Glu Lys
            180                 185                 190
His Phe Met Gly Ser Thr Lys Glu
        195                 200

<210> 5752
<211> 41
<212> PRT
<213> S.epidermidis

<400> 5752
Thr Leu Tyr Lys Ala Asn Leu Arg Gln Ser Met Val Leu Tyr Ala Leu
1               5                   10                  15
Phe Ile Val Phe Lys Tyr Asn Lys Trp Tyr Thr Ser Phe Pro Phe Thr
            20                  25                  30
Met His Glu Asn Thr Leu Gln Leu Leu
        35                  40

<210> 5753
<211> 46
<212> PRT
<213> S.epidermidis

<400> 5753
```

Glu Ser His Lys Leu Tyr Asn Tyr Lys Ser Leu Leu Glu Ile Asp Gly
1   5   10   15
Arg Leu Asp Leu Lys Ser Asn Phe Asp Asn Pro Lys Leu Ile Leu Asn
            20   25   30
Thr Lys Val Asn Asn Lys Ser Leu Asn Gln Tyr Leu Ile Phe
            35   40   45

<210> 5754
<211> 60
<212> PRT
<213> S.epidermidis

<400> 5754
Asn Ser Asn Asn Ser Leu Asn Asn Ile Leu His Val Asn Ser Pro Tyr
1   5   10   15
Ile Leu Phe Asp Ile Leu Tyr Pro Val Phe Val Gly Ala Lys Ser Lys
            20   25   30
Ile Cys Tyr Phe Gly Lys Tyr Glu Glu Ile Phe Leu Asp Val Ile Phe
            35   40   45
Tyr Gln Lys Leu Cys Ser Arg Ile His Leu Leu Phe
        50   55   60

<210> 5755
<211> 415
<212> PRT
<213> S.epidermidis

<400> 5755
Arg Met Asn Lys Asn Asn Arg Val Val Ile Thr Gly Ile Gly Ala Leu
1   5   10   15
Ser Pro Ile Gly Asn Asp Ala Lys Thr Thr Trp Asp Asn Ala Leu Lys
            20   25   30
Gly Val Asn Gly Ile Asp Lys Ile Thr Arg Ile Asp Thr Asp Asp Tyr
            35   40   45
Asn Val His Leu Ala Gly Glu Leu Lys Asp Phe Asn Ile Glu Asp His
        50   55   60
Ile Asp Arg Lys Glu Ala Arg Arg Met Asp Arg Phe Thr Gln Tyr Ala
65   70   75   80
Val Val Ala Ala Arg Glu Ala Val Lys Asp Ala Gln Leu Asn Ile Asn
                85   90   95
Glu Lys Asn Ala Asp Arg Ile Gly Val Trp Ile Gly Ser Gly Ile Gly
            100   105   110
Gly Met Glu Thr Phe Glu Val Ala His Thr Thr Leu Val Glu Arg Gly
        115   120   125
Pro Arg Arg Val Ser Pro Phe Phe Val Pro Met Leu Ile Pro Asp Met
        130   135   140
Ala Thr Gly Gln Val Ser Ile Asp Leu Gly Ala Lys Gly Pro Asn Gly
145   150   155   160
Ser Thr Val Thr Ala Cys Ala Thr Gly Thr Asn Ser Ile Gly Glu Ala
                165   170   175
Phe Lys Ile Ile Gln Arg Gly Asp Ala Asp Ala Met Val Thr Gly Gly
            180   185   190
Thr Glu Ala Pro Ile Thr His Met Ala Ile Ala Gly Phe Ser Ala Ser
        195   200   205
Arg Ala Leu Ser Thr Asn Asn Asp Pro Glu Thr Ala Cys Arg Pro Phe
        210   215   220

```
Gln Glu Gly Arg Asp Gly Phe Val Met Gly Glu Gly Ala Gly Ile Val
225                 230                 235                 240
Val Leu Glu Ser Leu Asp Ser Ala Lys Glu Arg Gly Ala Glu Ile Tyr
            245                 250                 255
Ala Glu Val Val Gly Tyr Gly Ser Ser Gly Asp Ala His His Ile Thr
            260                 265                 270
Ala Pro Ala Pro Glu Gly Glu Gly Gly Ser Arg Ala Met Gln Ala Ala
        275                 280                 285
Leu Asp Asp Ala Gly Ile Lys Ala Gln Asp Val Gln Tyr Leu Asn Ala
        290                 295                 300
His Gly Thr Ser Thr Pro Val Gly Asp Leu Tyr Glu Val Gln Ala Ile
305                 310                 315                 320
Lys Asn Thr Phe Gly Asp Ala Ala Lys Ser Leu Lys Val Ser Ser Thr
            325                 330                 335
Lys Ser Met Thr Gly His Leu Leu Gly Ala Thr Gly Gly Ile Glu Ala
            340                 345                 350
Ile Phe Ser Ala Leu Ser Ile Arg Asp Ser Lys Val Ala Pro Thr Ile
            355                 360                 365
His Ala Ile Thr Pro Asp Glu Glu Cys Asp Leu Asp Ile Val Leu Asn
        370                 375                 380
Val Ala Gln Asp Leu Asp Ile Thr Tyr Ala Met Ser Asn Ser Leu Gly
385                 390                 395                 400
Phe Gly Gly His Asn Ala Val Leu Val Phe Lys Lys Phe Glu Asp
                405                 410                 415
```

<210> 5756
<211> 132
<212> PRT
<213> S.epidermidis

<400> 5756

```
Leu Ser Cys Asn Ser Ile Ile Ala Phe Tyr Trp Arg Phe Val Gly Tyr
1               5                   10                  15
Leu Ile Tyr Trp Cys Lys Glu Asn Phe Lys Glu Val Ile Leu Met Glu
            20                  25                  30
Glu Ala Leu Lys Asp Ser Ile Leu Gly Ala Leu Glu Met Val Ile Asp
        35                  40                  45
Pro Glu Leu Gly Ile Asp Ile Val Asn Leu Gly Leu Val Tyr Lys Val
        50                  55                  60
Asp Val Asp Asp Glu Gly Leu Cys Thr Val Glu Met Thr Leu Thr Ser
65                  70                  75                  80
Met Gly Cys Pro Leu Gly Pro Gln Ile Ile Glu Gln Val Lys Ser Val
                85                  90                  95
Leu Ala Glu Ile Pro Glu Ile Ser Asp Thr Glu Val Met Ile Val Trp
            100                 105                 110
Ser Pro Pro Trp Asn Lys Asp Met Met Ser Arg Tyr Ala Lys Ile Ala
            115                 120                 125
Leu Gly Ile Gly
        130
```

<210> 5757
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5757

Leu Asp Val Leu Gly Phe Phe Ile His Val Ser Asn Glu Thr Cys Pro
1   5   10   15
Leu Ile Lys Leu Arg His Phe Tyr Cys Leu Tyr Gly Ile Met His Leu
            20   25   30
Ile Lys Phe Ile Thr Ser Asp Thr Phe Leu Thr Thr Lys
        35   40   45

<210> 5758
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5758
Arg Ile Asn Lys Trp Arg Leu Tyr Asn Met Arg Tyr Leu Met Thr Phe
1   5   10   15
Ile Trp Ala Val Leu Leu Leu Gln Met Val Asn Phe Val Leu Asn Ser
            20   25   30
Leu Asn Ser Gly Pro Glu Leu Asn Val Ile Asn Pro Ile Ile Ile Ala
        35   40   45
Val Ile Phe Thr Ile Val Val Ala Ile Leu Asp Pro Ile Leu Lys Pro
        50   55   60
Ser Lys Gly Ser Asn Gln Tyr Glu Ser
65   70

<210> 5759
<211> 104
<212> PRT
<213> S.epidermidis

<400> 5759
Ser Gly Asn Asn Arg Ser Ile Ile Tyr Leu Lys Glu Gly Ser Gln Lys
1   5   10   15
Leu Met Ile Ile Asn Arg Gly Pro Ile Val Asp Ile Asp Asn Gln Lys
            20   25   30
Tyr Ile Phe Asp Tyr Ser Ala Cys Asn Tyr Pro Val Gly Val Val Glu
        35   40   45
Asp Gln Ile Tyr Tyr Phe Asn Glu Asp Asn Ile Asp Lys Val Val Phe
        50   55   60
Glu Gly Tyr Ser Asp Gln Asp Glu Met Arg Phe Gln Glu Leu Phe Lys
65   70   75   80
Glu Met Lys Asn Asn Leu Asp Asp Asp Ile Gln Gln Gly Ile Val Gln
                85   90   95
Lys Gln Asp Asn Leu Gly Leu Ile
            100

<210> 5760
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5760
Asn Gln Cys Asn Tyr Asn Ile Asn Cys Phe Val Asn Phe His Tyr Val
1   5   10   15
Tyr Leu Arg Met Val Ile Leu Val Phe Ser Leu Ile Phe Ile Phe Thr
            20   25   30
Asp Asn Tyr Leu Val Tyr Gln Ser Lys Ser Ile Lys Glu Asp Val Met

```
      35                    40                    45
Ile
```

```
<210> 5761
<211> 276
<212> PRT
<213> S.epidermidis

<400> 5761
Arg Arg Ser Lys Met Thr Arg Gln Trp Glu Thr Leu Arg Glu Tyr Asp
1               5                   10                  15
Glu Ile Lys Tyr Glu Phe Phe Glu Gly Ile Ala Lys Val Thr Ile Asn
            20                  25                  30
Arg Pro Glu Val Arg Asn Ala Phe Thr Pro Lys Thr Val Ala Glu Met
        35                  40                  45
Ile Asp Ala Phe Ser Arg Ala Arg Asp Asp Gln Asn Val Ser Val Ile
        50                  55                  60
Val Leu Thr Gly Glu Gly Asp Lys Ala Phe Cys Ser Gly Gly Asp Gln
65                  70                  75                  80
Lys Lys Arg Gly His Gly Gly Tyr Val Gly Glu Asp Asp Ile Pro Arg
                85                  90                  95
Leu Asn Val Leu Asp Leu Gln Arg Leu Ile Arg Val Ile Pro Lys Pro
            100                 105                 110
Val Ile Ala Met Val Arg Gly Tyr Ala Ile Gly Gly Gly Asn Val Leu
            115                 120                 125
Asn Val Val Cys Asp Leu Thr Ile Ala Ala Asp Asn Ala Ile Phe Gly
        130                 135                 140
Gln Thr Gly Pro Lys Val Gly Ser Phe Asp Ala Gly Tyr Gly Ser Gly
145                 150                 155                 160
Tyr Leu Ala Arg Ile Val Gly His Lys Lys Ala Arg Glu Ile Trp Tyr
                165                 170                 175
Leu Cys Arg Gln Tyr Asn Ala Gln Glu Ala Leu Asp Met Gly Leu Val
            180                 185                 190
Asn Thr Val Val Pro Leu Glu Gln Val Glu Asp Glu Thr Val Lys Trp
            195                 200                 205
Cys Lys Asp Ile Met Gln His Ser Pro Thr Ala Leu Arg Phe Leu Lys
        210                 215                 220
Ala Ala Met Asn Ala Asp Thr Asp Gly Leu Ala Gly Leu Gln Gln Met
225                 230                 235                 240
Ala Gly Asp Ala Thr Leu Leu Tyr Tyr Thr Thr Asp Glu Ala Lys Glu
                245                 250                 255
Gly Arg Asp Ala Phe Lys Glu Lys Arg Asn Pro Asp Phe Asp Gln Phe
            260                 265                 270
Pro Lys Phe Pro
            275
```

```
<210> 5762
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5762
Tyr Leu Leu Asn Phe Thr Lys Gly Pro Tyr Phe Phe Lys Val Phe Gln
1               5                   10                  15
Cys Glu Ile Thr Tyr Lys His Lys Val Phe Gly Glu Thr Leu Glu Gly
```

```
                20                    25                    30
Thr Gly Gln Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys Ala
        35                    40                    45
Arg Lys Gln Tyr Glu Val Leu
    50                    55
```

<210> 5763
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5763
```
Leu Asp Val Lys Asn Pro Lys Asn Ile Ala Ile Leu Lys Asn Val Tyr
1                   5                   10                    15
Lys Leu Asp Ser Gln Tyr Thr Ile Ser Lys Asp Ile Arg Ala Pro Leu
            20                    25                    30
Leu Ile Val Phe Leu Phe Arg Met Ile Ser Met Arg
        35                    40
```

<210> 5764
<211> 85
<212> PRT
<213> S.epidermidis

<400> 5764
```
Val Phe Lys Asn His Val Gln Arg Glu Asn Ile Asn Tyr Glu Asn Glu
1                   5                   10                    15
Asp Ile Asp His Ser Lys Lys His Leu Asn Tyr Asp Leu Ile Asn Asp
            20                    25                    30
Gly Lys Gln Asn Phe Asn Asp Leu Ile Asp Glu Lys Ile Glu Arg Asn
        35                    40                    45
Tyr Thr Gly Lys Arg Lys Ile Arg Lys Asp Ala Val Lys His Ile Asp
    50                    55                    60
Gly Met Ile Thr Ser Asp Asn Glu Phe Phe Ser Asn Gln Thr Pro Val
65                    70                    75                    80
Asn Thr Lys Phe Phe
                85
```

<210> 5765
<211> 130
<212> PRT
<213> S.epidermidis

<400> 5765
```
Ser Leu Lys Asn Pro Met Gln Phe Tyr Tyr Ser Asn Cys Glu Gln Asn
1                   5                   10                    15
Ala Ser Asn Leu Leu Val Ile Asn Val Gln Pro Asn Glu Gly Phe Ser
            20                    25                    30
Leu Cys Val Asn Gly Lys Lys Ser Asn Gln Asn Asn Glu Met Gln Lys
        35                    40                    45
Val Lys Leu Ser Tyr Thr Met Pro Ile Lys Asp Lys Met Asn Thr Val
    50                    55                    60
Asp Ala Tyr Glu Asn Leu Ile Tyr Asp Thr Leu Ile Gly Glu Gln Thr
65                    70                    75                    80
Asn Phe Thr His Trp Glu Glu Leu Lys Ile Leu Gly Asn Leu Leu Met
                85                    90                    95
```

```
Ile Leu Lys Met Tyr Gly Asn Lys Asn Ser His Ser Phe Leu Ile Met
            100                 105                 110
Pro Leu Asp Ala Met Gly Leu Lys Lys Val Lys Asn Tyr Leu Val Lys
        115                 120                 125
Thr Asp
    130
```

<210> 5766
<211> 192
<212> PRT
<213> S.epidermidis

<400> 5766
```
Thr Leu Lys Lys Glu Ile Leu Glu Trp Ile Val Ala Ile Ala Val Ala
1               5                   10                  15
Ile Ala Leu Ile Ala Ile Ile Thr Lys Phe Val Gly Lys Ser Tyr Ser
            20                  25                  30
Ile Lys Gly Asp Ser Met Asp Pro Thr Leu Lys Asp Gly Glu Arg Val
        35                  40                  45
Val Val Asn Ile Ile Gly Tyr Lys Leu Gly Gly Val Glu Lys Gly Asn
    50                  55                  60
Val Ile Val Phe His Ala Asn Lys Lys Asp Asp Tyr Val Lys Arg Val
65                  70                  75                  80
Ile Gly Thr Pro Gly Asp Ser Val Glu Tyr Lys Asn Asp Thr Leu Tyr
            85                  90                  95
Val Asn Gly Lys Lys Gln Ser Glu Pro Tyr Leu Asn Tyr Asn Glu Lys
            100                 105                 110
Arg Lys Gln Thr Glu Tyr Ile Thr Gly Ser Phe Lys Thr Lys Asn Leu
        115                 120                 125
Pro Asn Ala Asn Pro Gln Ser Asn Val Ile Pro Lys Gly Lys Tyr Leu
        130                 135                 140
Val Leu Gly Asp Asn Arg Glu Val Ser Lys Asp Ser Arg Ser Phe Gly
145                 150                 155                 160
Leu Ile Asp Lys Asp Gln Ile Val Gly Lys Val Ser Leu Arg Tyr Trp
            165                 170                 175
Pro Phe Ser Glu Phe Lys Ser Asn Phe Asn Pro Asn Asn Thr Lys Asn
            180                 185                 190
```

<210> 5767
<211> 1335
<212> PRT
<213> S.epidermidis

<400> 5767
```
Met Ala Lys Lys Phe Asn Tyr Lys Leu Pro Ser Met Val Ala Leu Thr
1               5                   10                  15
Leu Phe Gly Thr Ala Phe Thr Ala His Gln Ala Asn Ala Ala Glu Gln
            20                  25                  30
Pro Gln Asn Gln Ser Asn His Lys Asn Val Leu Asp Asp Gln Thr Ala
        35                  40                  45
Leu Lys Gln Ala Glu Lys Ala Lys Ser Glu Val Thr Gln Ser Thr Thr
        50                  55                  60
Asn Val Ser Gly Thr Gln Thr Tyr Gln Asp Pro Thr Gln Val Gln Pro
65                  70                  75                  80
Lys Gln Asp Thr Gln Ser Thr Thr Tyr Asp Ala Ser Leu Asp Glu Met
            85                  90                  95
```

Ser Thr Tyr Asn Glu Ile Ser Ser Asn Gln Lys Gln Gln Ser Leu Ser
            100   105   110

Thr Asp Asp Ala Asn Gln Asn Gln Thr Asn Ser Val Thr Lys Asn Gln
        115   120   125

Gln Glu Glu Thr Asn Asp Leu Thr Gln Glu Asp Lys Thr Ser Thr Asp
    130   135   140

Thr Asn Gln Leu Gln Glu Thr Gln Ser Val Ala Lys Glu Asn Glu Lys
145   150   155   160

Asp Leu Gly Ala Asn Ala Asn Asn Glu Gln Gln Asp Lys Lys Met Thr
                165   170   175

Ala Ser Gln Pro Ser Glu Asn Gln Ala Ile Glu Thr Gln Thr Ala Ser
            180   185   190

Asn Asp Asn Glu Ser Gln Gln Lys Ser Gln Gln Val Thr Ser Glu Gln
        195   200   205

Asn Glu Thr Ala Thr Pro Lys Val Ser Asn Thr Asn Ala Ser Gly Tyr
    210   215   220

Asn Phe Asp Tyr Asp Asp Glu Asp Asp Asp Ser Ser Thr Asp His Leu
225   230   235   240

Glu Pro Ile Ser Leu Asn Asn Val Asn Ala Thr Ser Lys Gln Thr Thr
                245   250   255

Ser Tyr Lys Tyr Lys Glu Pro Ala Gln Arg Val Thr Thr.Asn Thr Val
            260   265   270

Lys Lys Glu Thr Ala Ser Asn Gln Ala Thr Ile Asp Thr Lys Gln Phe
        275   280   285

Thr Pro Phe Ser Ala Thr Ala Gln Pro Arg Thr Val Tyr Ser Val Ser
    290   295   300

Ser Gln Lys Thr Ser Ser Leu Pro Lys Tyr Thr Pro Lys Val Asn Ser
305   310   315   320

Ser Ile Asn Asn Tyr Ile Arg Lys Lys Asn Met Lys Ala Pro Arg Ile
                325   330   335

Glu Glu Asp Tyr Thr Ser Tyr Phe Pro Lys Tyr Gly Tyr Arg Asn Gly
            340   345   350

Val Gly Arg Pro Glu Gly Ile Val Val His Asp Thr Ala Asn Asp Asn
        355   360   365

Ser Thr Ile Asp Gly Glu Ile Ala Phe Met Lys Arg Asn Tyr Thr Asn
    370   375   380

Ala Phe Val His Ala Phe Val Asp Gly Asn Arg Ile Ile Glu Thr Ala
385   390   395   400

Pro Thr Asp Tyr Leu Ser Trp Gly Ala Gly Pro Tyr Gly Asn Gln Arg
                405   410   415

Phe Ile Asn Val Glu Ile Val His Thr His Asp Tyr Asp Ser Phe Ala
            420   425   430

Arg Ser Met Asn Asn Tyr Ala Asp Tyr Ala Ala Thr Gln Leu Gln Tyr
        435   440   445

Tyr Asn Leu Lys Pro Asp Ser Ala Glu Asn Asp Gly Arg Gly Thr Val
    450   455   460

Trp Thr His Ala Ala Ile Ser Asn Phe Leu Gly Gly Thr Asp His Ala
465   470   475   480

Asp Pro His Gln Tyr Leu Arg Ser His Asn Tyr Ser Tyr Ala Glu Leu
                485   490   495

Tyr Asp Leu Ile Tyr Glu Lys Tyr Leu Ile Lys Thr Lys Gln Val Ala
            500   505   510

Pro Trp Gly Thr Thr Ser Thr Lys Pro Ser Gln Pro Ser Lys Pro Ser
        515   520   525

Gly Gly Thr Asn Asn Lys Leu Thr Val Ser Ala Asn Arg Gly Val Ala
    530   535   540

Gln Ile Lys Pro Thr Asn Asn Gly Leu Tyr Thr Thr Val Tyr Asp Ser
545   550   555   560
Lys Gly His Lys Thr Asp Gln Val Gln Lys Thr Leu Ser Val Thr Lys
                565   570   575
Thr Ala Thr Leu Gly Asn Asn Lys Phe Tyr Leu Val Glu Asp Tyr Asn
                580   585   590
Ser Gly Lys Lys Tyr Gly Trp Val Lys Gln Gly Asp Val Val Tyr Asn
                595   600   605
Thr Ala Lys Ala Pro Val Lys Val Asn Gln Thr Tyr Asn Val Lys Ala
                610   615   620
Gly Ser Thr Leu Tyr Thr Val Pro Trp Gly Thr Pro Lys Gln Val Ala
625   630   635   640
Ser Lys Val Ser Gly Thr Gly Asn Gln Thr Phe Lys Ala Thr Lys Gln
                645   650   655
Gln Gln Ile Asp Lys Ala Thr Tyr Leu Tyr Gly Thr Val Asn Gly Lys
                660   665   670
Ser Gly Trp Ile Ser Lys Tyr Tyr Leu Thr Thr Ala Ser Lys Pro Ser
                675   680   685
Asn Pro Thr Lys Pro Ser Thr Asn Asn Gln Leu Thr Val Thr Asn Asn
    690   695   700
Ser Gly Val Ala Gln Ile Asn Ala Lys Asn Ser Gly Leu Tyr Thr Thr
705   710   715   720
Val Tyr Asp Thr Lys Gly Lys Thr Thr Asn Gln Ile Gln Arg Thr Leu
                725   730   ·735
Ser Val Thr Lys Ala Ala Thr Leu Gly Asp Lys Lys Phe Tyr Leu Val
                740   745   750
Gly Asp Tyr Asn Thr Gly Thr Asn Tyr Gly Trp Val Lys Gln Asp Glu
                755   760   765
Val Ile Tyr Asn Thr Ala Lys Ser Pro Val Lys Ile Asn Gln Thr Tyr
    770   775   780
Asn Val Lys Pro Gly Val Lys Leu His Thr Val Pro Trp Gly Thr Tyr
785   ·790   795   800
Asn Gln Val Ala Gly Thr Val Ser Gly Lys Gly Asp Gln Thr Phe Lys
                805   810   815
Ala Thr Lys Gln Gln Gln Ile Asp Lys Ala Thr Tyr Leu Tyr Gly Thr
                820   825   830
Val Asn Gly Lys Ser Gly Trp Ile Ser Lys Tyr Tyr Leu Thr Ala Pro
                835   840   845
Ser Lys Val Gln Ala Leu Ser Thr Gln Ser Thr Pro Ala Pro Lys Gln
    850   855   860
Val Lys Pro Ser Thr Gln Thr Val Asn Gln Ile Ala Gln Val Lys Ala
865   870   875   880
Asn Asn Ser Gly Ile Arg Ala Ser Val Tyr Asp Lys Thr Ala Lys Ser
                885   890   895
Gly Thr Lys Tyr Ala Asn Arg Thr Phe Leu Ile Asn Lys Gln Arg Thr
                900   905   910
Gln Gly Asn Asn Thr Tyr Val Leu Leu Gln Asp Gly Thr Ser Asn Thr
                915   920   925
Pro Leu Gly Trp Val Asn Ile Asn Asp Val Thr Thr Gln Asn Ile Gly
    930   935   940
Lys Gln Thr Gln Ser Ile Gly Lys Tyr Ser Val Lys Pro Thr Asn Asn
945   950   955   960
Gly Leu Tyr Ser Ile Ala Trp Gly Thr Lys Asn Gln Gln Leu Leu Ala
                965   970   975
Pro Asn Thr Leu Ala Asn Gln Ala Phe Asn Ala Ser Lys Ala Val Tyr
    980   985   990

Val Gly Lys Asp Leu Tyr Leu Tyr Gly Thr Val Asn Asn Arg Thr Gly
      995   1000   1005

Trp Ile Ala Ala Lys Asp Leu Ile Gln Asn Ser Thr Asp Ala Gln Ser
    1010   1015   1020

Thr Pro Tyr Asn Tyr Thr Phe Val Ile Asn Asn Ser Lys Ser Tyr Phe
1025   1030   1035   1040

Tyr Met Asp Pro Thr Lys Ala Asn Arg Tyr Ser Leu Lys Pro Tyr Tyr
          1045   1050   1055

Glu Gln Thr Phe Thr Val Ile Lys Gln Lys Asn Ile Asn Gly Val Lys
          1060   1065   1070

Trp Tyr Tyr Gly Gln Leu Leu Asp Gly Lys Tyr Val Trp Ile Lys Ser
          1075   1080   1085

Thr Asp Leu Val Lys Glu Lys Ile Lys Tyr Ala Tyr Thr Gly Met Thr
          1090   1095   1100

Leu Asn Asn Ala Ile Asn Ile Gln Ser Arg Leu Lys Tyr Lys Pro Gln
1105   1110   1115   1120

Val Gln Asn Glu Pro Leu Lys Trp Ser Asn Ala Asn Tyr Ser Gln Ile
          1125   1130   1135

Lys Asn Ala Met Asp Thr Lys Arg Leu Ala Asn Asp Ser Ser Leu Lys
          1140   1145   1150

Tyr Gln Phe Leu Arg Leu Asp Gln Pro Gln Tyr Leu Ser Ala Gln Ala
          1155   1160   1165

Leu Asn Lys Leu Leu Lys Gly Lys Gly Val Leu Glu Asn Gln Gly Ala
          1170   1175   1180

Ala Phe Ser Gln Ala Ala Arg Lys Tyr Gly Leu Asn Glu Ile Tyr Leu
1185   1190   1195   1200

Ile Ser His Ala Leu Val Glu Thr Gly Asn Gly Thr Ser Gln Leu Ala
          1205   1210   1215

Lys Gly Gly Asp Val Ser Lys Gly Lys Phe Thr Thr Lys Thr Gly His
          1220   1225   1230

Lys Tyr His Asn Val Phe Gly Ile Gly Ala Phe Asp Asn Asn Ala Leu
          1235   1240   1245

Val Asp Gly Ile Lys Tyr Ala Lys Asn Ala Gly Trp Thr Ser Val Ser
          1250   1255   1260

Lys Ala Ile Ile Gly Gly Ala Lys Phe Ile Gly Asn Ser Tyr Val Lys
1265   1270   1275   1280

Ala Gly Gln Asn Thr Leu Tyr Lys Met Arg Trp Asn Pro Ala Asn Pro
          1285   1290   1295

Gly Thr His Gln Tyr Ala Thr Asp Ile Asn Trp Ala Asn Val Asn Ala
          1300   1305   1310

Gln Val Leu Lys Gln Phe Tyr Asp Lys Ile Gly Glu Val Gly Lys Tyr
          1315   1320   1325

Phe Glu Ile Pro Thr Tyr Lys
          1330   1335

<210> 5768
<211> 57
<212> PRT
<213> S.epidermidis

<400> 5768
Gly Val Glu Lys Tyr Gly Ser Leu Val Thr Val Tyr Ser Ile Phe Ala
1   5   10   15

Asp Ser Gln Gly Asn Leu Glu Ser Ala Thr Glu Arg Val Lys Lys Asp
          20   25   30

Asn Pro Asn Leu Asn Ser Leu Gly Leu Ile Pro Leu Ala Ser Tyr Cys

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          35                    40                        45
Ile Ala Phe Ile Asn Leu Ile Ile Gly
     50                    55


<210> 5769
<211> 52
<212> PRT
<213> S.epidermidis


<400> 5769
Ile Ile Arg Lys Gly Leu Ile Phe Leu Lys Tyr Phe Asn Val Lys Leu
1                   5                   10                  15
His Met Asn Thr Lys Tyr Phe Gly Glu Thr Leu Glu Gly Thr Gly Gln
             20                  25                  30
Ala Glu Asp Tyr Arg Leu Lys Leu Ser Pro Lys Lys Ala Ser Gln Gln
         35                  40                  45
Tyr Glu Val Leu
     50


<210> 5770
<211> 518
<212> PRT
<213> S.epidermidis


<400> 5770
His Leu Met Asn Gly Thr Cys Tyr Thr Lys Phe Lys Glu Arg Ser Gly
1                   5                   10                  15
Ser Met Glu Lys Asn Glu Asn Lys Ile Val Asp Val Ile Ala Thr Ser
             20                  25                  30
Asp Met His Ser His Phe Leu Asn Gly Asp Tyr Gly Ser Asn Ile Tyr
         35                  40                  45
Arg Ala Gly Thr Tyr Val Asn Glu Ala Arg Lys Asn Asn Glu Asn Val
     50                  55                  60
Ile Leu Leu Asp Ser Gly Gly Ser Leu Ala Gly Ser Leu Ala Ala Phe
65                  70                  75                  80
Tyr Tyr Ala Val Val Ala Pro Tyr Lys Arg His Pro Met Ile Lys Leu
             85                  90                  95
Met Asn Ala Met Gln Tyr Asp Ala Ser Gly Ile Ser Pro Asn Glu Phe
             100                 105                 110
Lys Phe Gly Leu Ser Phe Leu Thr Arg Ser Val Ala Leu Ser Arg Phe
             115                 120                 125
Pro Trp Leu Ser Ala Asn Ile Glu Tyr Thr Val Thr Arg Glu Pro Tyr
     130                 135                 140
Phe Ser Thr Pro Tyr Thr Ile Lys Met Tyr Ser Asp Leu Lys Ile Ala
145                 150                 155                 160
Ile Val Gly Leu Thr Ser Asp Gly Leu Met Lys Asn Glu Tyr Ala Glu
             165                 170                 175
Met Glu Glu Asp Val Cys Ile Glu Lys Thr Leu Val Ser Ala Lys Arg
             180                 185                 190
Trp Ile Arg Tyr Ile His Glu Val Glu Glu Pro Asp Phe Leu Ile Val
             195                 200                 205
Ile Tyr His Gly Gly Leu Asn Lys Ile Ser Ser Ala Asn Lys Arg Asn
     210                 215                 220
Glu Lys Asn Ala Asn Glu Ala Glu Lys Ile Met Glu Glu Leu Gly Val
225                 230                 235                 240
Ile Asp Val Ile Ile Thr Ala His Gln His Gln Thr Val Val Gly Lys
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                     245                    250                    255
Asp His Gly Thr Ile Tyr Val Gln Ala Gly Gln Asn Ala Glu Glu Leu
             260                    265                    270
Val His Leu Ser Ile Lys Phe Lys Lys Arg Thr Thr Ser Tyr Glu Ile
             275                    280                    285
Glu His Ile Asp Ser Lys Val Ile Asp Leu Asn Asp Tyr His Glu Asp
         290                    295                    300
Glu Gln Leu Leu Lys Glu Thr Tyr Tyr Asp Arg Lys Ala Val Lys His
305                    310                    315                    320
Trp Ala Asn Ser Val Val Ser Asn Lys Asn Asn Gly Leu Thr Val Gln
                 325                    330                    335
Cys Ile Glu Asp Ile Ile Cys Lys Pro His Pro Phe Thr Gln Leu Leu
             340                    345                    350
His Asp Ala Ile Arg Leu Ala Tyr Asn Tyr Asp Ile Ser Cys Val His
             355                    360                    365
Ile Pro Lys Asn Gly Glu Glu Gly Leu Lys Gly Thr Ile Arg Asn Arg
         370                    375                    380
Asp Ile Tyr Asp Ala Tyr Pro His Pro Asp Lys Pro Ile Asp Ile Thr
385                    390                    395                    400
Val Lys Gly Lys Asn Ile Lys Asp Ile Leu Glu Tyr Ser Tyr Ala His
                 405                    410                    415
Ile Asp Phe Asn Lys Arg Gln Leu Ser Met Thr Met Ile Asp Glu Thr
             420                    425                    430
Leu Phe Thr Val Trp Gln Gly Phe Asp Tyr Cys Ile Asp Met Ser Gln
             435                    440                    445
Ser Pro Phe Asn Arg Val Lys Leu Asn Gly Leu Asn Glu Glu Asp Ser
         450                    455                    460
Tyr Arg Ile Thr Met Thr Asp Tyr Cys Tyr Arg Asn Tyr Lys Met Tyr
465                    470                    475                    480
Leu Gln Glu Ala Ile Val His Asp Thr Tyr Ser Glu Thr Met Gly Gly
                 485                    490                    495  ·
Leu Ile Arg Lys Asn Leu Lys Cys Asp Met Tyr Ser Val Lys Leu Asn
             500                    505                    510
His Asn Phe Lys Val Tyr
         515
```

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<210> 5771
<211> 213
<212> PRT
<213> S.epidermidis


<400> 5771
Asn Lys Met Asn Gln Trp Asp Gln Phe Leu Thr Pro Tyr Lys Gln Ala
1                5                    10                    15
Val Asp Glu Leu Lys Val Lys Leu Lys Gly Leu Arg Lys Gln Tyr Glu
             20                    25                    30
Val Gly Glu His Asn Ser Pro Ile Glu Phe Val Thr Gly Arg Val Lys
         35                    40                    45
Pro Ile Ser Ser Val Ile Asp Lys Ala Asn Lys Arg Gly Ile Pro Phe
     50                    55                    60
Asp Cys Leu His Glu Glu Met Tyr Asp Ile Ala Gly Leu Arg Ile Met
65                    70                    75                    80
Cys Gln Phe Val Asp Asp Ile Asp Ile Val Val Asp Ile Leu Arg Gln
                 85                    90                    95
Arg Gln Asp Phe Lys Val Ile Glu Glu Arg Asp Tyr Ile Arg Asn Thr
             100                    105                    110
```

Lys Ala Ser Gly Tyr Arg Ser Tyr His Val Ile Ile Lys Tyr Pro Ile
    115   120   125
Glu Thr Leu Ser Gly Gln Lys His Ile Leu Ala Glu Ile Gln Ile Arg
    130   135   140
Thr Leu Ala Met Asn Phe Trp Ala Thr Ile Glu His Thr Leu Arg Tyr
145   150   155   160
Lys Tyr Asp Gly Ala Tyr Pro Asp Glu Ile Gln His Arg Leu Glu Arg
            165   170   175
Ala Ala Glu Ala Ala Tyr Leu Leu Asp Glu Glu Met Ser Glu Ile Lys
        180   185   190
Asp Glu Ile Gln Glu Ala Gln Lys Tyr Tyr Thr Gln Lys Arg Ala Lys
    195   200   205
Lys His Glu Asn Asp
    210

<210> 5772
<211> 420
<212> PRT
<213> S.epidermidis

<400> 5772
Lys Glu Ala Asn Arg Ile Met Thr Glu Asn Asn Asn Leu Val Thr Ser
1   5   10   15
Thr Gln Gly Ile Ile Lys Glu Ala Leu His Lys Leu Gly Phe Asp Asp
        20   25   30
Gly Met Tyr Asp Leu Ile Lys Glu Pro Ile Arg Phe Leu Gln Val Arg
        35   40   45
Ile Pro Val Arg Met Asp Asp Gly Thr Val Lys Thr Phe Thr Gly Tyr
    50   55   60
Arg Ala Gln His Asn Asp Ala Val Gly Pro Thr Lys Gly Gly Val Arg
65   70   75   80
Phe His Pro Glu Val Asp Glu Glu Glu Val Lys Ala Leu Ser Met Trp
        85   90   95
Met Thr Leu Lys Cys Gly Ile Val Asn Leu Pro Tyr Gly Gly Gly Lys
        100   105   110
Gly Gly Ile Val Cys Asp Pro Arg Gln Met Ser Ile His Glu Val Glu
        115   120   125
Arg Leu Ser Arg Gly Tyr Val Arg Ala Ile Ser Gln Phe Val Gly Pro
    130   135   140
Asn Lys Asp Ile Pro Ala Pro Asp Val Phe Thr Asn Ser Gln Ile Met
145   150   155   160
Ala Trp Met Met Asp Glu Tyr Ser Ala Leu Asp Lys Phe Asn Ser Pro
        165   170   175
Gly Phe Ile Thr Gly Lys Pro Ile Val Leu Gly Gly Ser Gln Gly Arg
        180   185   190
Asp Arg Ser Thr Ala Leu Gly Val Val Ile Ala Ile Glu Gln Ala Ala
        195   200   205
Lys Arg Arg Gly Met Asp Ile Lys Asp Ala Lys Ile Val Ile Gln Gly
    210   215   220
Phe Gly Asn Ala Gly Ser Phe Leu Ala Lys Phe Leu Tyr Asp Leu Gly
225   230   235   240
Ala Lys Val Val Gly Ile Ser Asp Ala Tyr Gly Ala Leu His Asp Pro
        245   250   255
Asn Gly Leu Asp Ile Asp Tyr Leu Leu Asp Arg Arg Asp Ser Phe Gly
        260   265   270
Thr Val Thr Asn Leu Phe Glu Asp Thr Ile Ser Asn Lys Glu Leu Phe

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              275                    280                    285
Glu Leu Asp Cys Asp Ile Leu Val Pro Ala Ala Ile Ser Asn Gln Ile
        290                    295                    300
Thr Glu Asp Asn Ala His Asp Ile Lys Ala Ser Ile Val Val Glu Ala
305                    310                    315                    320
Ala Asn Gly Pro Thr Thr Pro Glu Ala Thr Arg Ile Leu Thr Glu Arg
                325                    330                    335
Asp Ile Leu Leu Val Pro Asp Val Leu Ala Ser Ala Gly Gly Val Thr
                340                    345                    350
Val Ser Tyr Phe Glu Trp Val Gln Asn Asn Gln Gly Tyr Tyr Trp Thr
                355                    360                    365
Glu Glu Glu Val Asn Asp Lys Leu Arg Glu Lys Leu Val Thr Ala Phe
        370                    375                    380
Asp Thr Ile Tyr Glu Leu Ser Gln Asn Arg Lys Ile Asp Met Arg Leu
385                    390                    395                    400
Ala Ala Tyr Ile Val Gly Ile Lys Arg Thr Ala Glu Ala Ala Arg Tyr
                405                    410                    415
Arg Gly Trp Ala
        420
```

<210> 5773
<211> 121
<212> PRT
<213> S.epidermidis

<400> 5773
```
Ile Lys Lys Asn Ile Tyr Asn Asn Val Ile Ala Leu Leu Phe Asp Trp
1                   5                   10                  15
Phe Val Ile Phe Ser Ser Ile Leu Ile Ser Val Thr Phe Asn Asn Ile
                20                  25                  30
Leu Ile Tyr Leu Val Ala Ile Ile Leu Ile Gly Ser Arg Met Arg Ala
                35                  40                  45
Phe Asp Asn Leu Met His Glu Ala Cys His Arg Ser Leu Phe Thr Asn
        50                  55                  60
Lys Phe Trp Asn Lys Trp Ile Thr Cys Leu Phe Val Ala Phe Pro Val
65                  70                  75                  80
Phe Thr Ser Tyr Thr Ala Tyr Arg Asn Ala His His Cys Thr Gly Phe
                85                  90                  95
Phe Lys Thr Thr Leu Pro Gly Phe Tyr Ser Val Val Lys Asp Ile Phe
                100                 105                 110
Thr Pro Asn Tyr Glu Arg Lys Glu Ser
        115                 120
```

<210> 5774
<211> 381
<212> PRT
<213> S.epidermidis

<400> 5774
```
Leu Ser Phe Asp Ile Tyr Leu Leu Ser Met Lys Lys Asn Lys Ile Gly
1                   5                   10                  15
Gly Ser Gln Ser Met Phe Asn Lys Val Trp Phe Arg Thr Gly Ile Phe
                20                  25                  30
Phe Ile Met Leu Phe Ile Leu Ile Lys Leu Phe Met Glu Val His Glu
                35                  40                  45
Val Phe Ala Pro Ile Ala Thr Ile Ile Gly Ser Val Phe Leu Pro Phe
```

```
                50                      55                      60
    Leu Ile Ser Gly Phe Leu Phe Tyr Ile Cys Leu Pro Phe Gln Asn Ile
    65                      70                      75                      80
    Leu Glu Lys Trp Gly Phe Pro Arg Trp Ala Ser Ile Thr Thr Ile Phe
                            85                      90                      95
    Ile Gly Leu Ile Ala Ile Ile Ala Ile Val Val Ser Phe Ile Ala Pro
                    100                     105                     110
    Ile Ile Ile Ser Asn Ile Asn Asn Leu Ile Lys Gln Thr Pro Ser Leu
                    115                     120                     125
    Gln Lys Glu Ala Glu Gln Leu Ile Asn Phe Ser Leu Arg Gln Met Asp
            130                     135                     140
    Lys Leu Pro Asp Asp Val Thr His Arg Ile Asn Lys Ala Val Lys Ser
    145                     150                     155                     160
    Met Gly Asp Gly Ala Thr Ser Ile Leu Ser Asn Ser Val Ser Tyr Ile
                    165                     170                     175
    Thr Ser Phe Ile Ser Thr Val Phe Leu Leu Ile Met Val Pro Phe Phe
                    180                     185                     190
    Leu Ile Tyr Met Leu Lys Asp His Glu Lys Phe Ile Pro Ala Ile Gly
                    195                     200                     205
    Lys Phe Phe Lys Gly Glu Arg Lys Val Phe Val Val Asp Leu Leu Lys
            210                     215                     220
    Asp Leu Asn Phe Thr Leu Lys Ser Tyr Ile Gln Gly Gln Val Thr Val
    225                     230                     235                     240
    Ser Ile Ile Leu Gly Ile Ile Leu Tyr Ile Gly Tyr Thr Ile Ile Gly
                    245                     250                     255
    Leu Pro Tyr Thr Pro Leu Leu Val Leu Phe Ala Gly Val Ala Asn Leu
                    260                     265                     270
    Ile Pro Phe Leu Gly Pro Trp Leu Ser Phe Ala Pro Ala Ala Ile Leu
                    275                     280                     285
    Gly Ile Ile Asp Gly Pro Ser Thr Phe Ile Trp Val Cys Val Val Thr
            290                     295                     300
    Leu Ile Ala Gln Gln Leu Glu Gly Asn Val Ile Thr Pro Asn Val Met
    305                     310                     315                     320
    Gly Lys Ser Leu Ser Ile His Pro Leu Thr Ile Ile Val Val Ile Leu
                    325                     330                     335
    Ala Ala Gly Asp Leu Gly Gly Phe Thr Leu Ile Leu Val Ala Val Pro
            340                     345                     350
    Leu Tyr Ala Val Ile Lys Thr Leu Val Ser Asn Ile Phe Lys Tyr Arg
            355                     360                     365
    Gln Arg Ile Val Asp Lys Ala Asn Ser Asn Val Lys Asp
        370                     375                     380
```

<210> 5775
<211> 463
<212> PRT
<213> S.epidermidis

<400> 5775

```
    Asn Gln Ile Glu Ile Asn Val Glu Val Lys Ile Met Ser Val Leu Ser
    1                       5                       10                      15
    Gln Leu Leu Lys Lys Ser Ser Pro Gln Gln Gly Ile Ile Leu Tyr Tyr
                    20                      25                      30
    Leu Phe Ala Ile Val Val Ala Phe Leu Leu Leu Asn Leu Pro Tyr Val
            35                      40                      45
    His Lys Gln Gly Val Glu Val Asn Pro Ile Asp Thr Leu Phe Val Ala
        50                      55                      60
```

Val Ser Gly Ile Ser Val Thr Gly Leu Ser Pro Ile Thr Ile Val Asp
65   70   75   80
Thr Tyr Ser Thr Phe Gly Gln Ile Ile Ile Leu Ile Ile Leu Asn Ile
                85   90   95
Gly Gly Ile Gly Val Met Ala Ile Gly Thr Met Leu Trp Val Val Leu
            100   105   110
Gly Lys His Ile Gly Ile Arg Glu Arg Gln Leu Ile Met Leu Asp Asn
        115   120   125
Asn Arg Asp Thr Met Ser Gly Thr Val Lys Leu Ile Leu Glu Ile Val
        130   135   140
Arg Thr Ile Phe Ile Ile Glu Phe Ile Gly Ala Leu Leu Leu Ala Phe
145   150   155   160
Tyr Phe Tyr Arg Asp Asn Pro Asp Leu Lys Asn Ala Leu Met Gln Gly
                165   170   175
Ile Phe Val Ser Val Ser Ala Thr Thr Asn Gly Gly Leu Asp Ile Thr
            180   185   190
Gly Glu Ser Leu Val Pro Tyr Ala Lys Asp Tyr Phe Val Gln Thr Ile
        195   200   205
Val Met Phe Leu Ile Val Leu Gly Ser Ile Gly Phe Pro Val Leu Leu
    210   215   220
Glu Leu Lys Ala Tyr Ile Lys Asn Arg Val Thr Asn Phe Arg Phe Ser
225   230   235   240
Leu Phe Thr Lys Ile Thr Thr Thr Tyr Leu Phe Leu Phe Leu Phe
                245   250   255
Gly Val Ile Val Val Leu Ile Leu Glu His Ser Asn Ala Phe Lys Gly
            260   265   270
Leu Ser Trp His Gln Ser Leu Phe Tyr Ala Leu Phe Gln Ser Ser Thr
        275   280   285
Thr Arg Ser Ala Gly Leu Gln Thr Ile Asp Val Ser His Phe Ser Asp
        290   295   300
Ala Thr Asn Ile Val Met Gly Leu Leu Met Phe Ile Gly Ser Ser Pro
305   310   315   320
Ser Ser Val Gly Gly Gly Ile Arg Thr Thr Thr Phe Ala Ile Leu Ile
            325   330   335
Leu Phe Val Ile Asn Phe Asn Asn Thr Gly Asp Lys Thr Gly Ile Lys
            340   345   350
Ile Phe Asn Arg Glu Val His Ile Met Asp Val Gln Arg Ser Phe Ala
            355   360   365
Val Phe Thr Met Ala Ser Leu Ile Thr Phe Ile Ser Met Ile Ile Ile
370   375   380
Ser Ala Thr Glu Gln Gly Lys Leu Ser Phe Leu Gln Ile Phe Phe Glu
385   390   395   400
Val Met Ser Ala Phe Gly Thr Cys Gly Leu Ser Leu Gly Val Thr Ser
                405   410   415
Asp Val Asn Asp Ile Thr Lys Ala Val Leu Met Ile Leu Met Phe Ile
            420   425   430
Gly Arg Val Gly Leu Ile Ser Phe Ile Ile Met Leu Ala Gly Arg Lys
        435   440   445
Glu Pro Glu Lys Tyr Ser Tyr Pro Lys Glu Arg Ile Gln Ile Gly
        450   455   460

<210> 5776
<211> 56
<212> PRT
<213> S.epidermidis

<400> 5776

```
Arg Arg Ile Asp Thr Ile Thr Tyr Leu Lys Ser Leu Glu Thr Leu Arg
1               5                   10                  15
Lys Pro Leu Asn Val Leu Tyr Lys Val Glu Thr Glu Lys Val Gly Gly
            20                  25                  30
Leu Phe Asp Lys Glu Leu Gln Glu Thr Ala Asn Val Val Ile Asn Lys
        35                  40                  45
Asp Glu Phe Asn Gln Phe Gln Glu
    50                  55
```

<210> 5777
<211> 61
<212> PRT
<213> S.epidermidis

<400> 5777

```
Phe Ile Leu Asp Gly Ile Phe Val Cys Cys Cys Ile Asp Phe Ser Asp
1               5                   10                  15
Trp Phe Gly Ala Gly Glu Trp Phe Glu Val Ser Ala Ile Glu Gly Glu
            20                  25                  30
Leu Lys Leu Ala Lys Pro Ser Val Thr Val Asp Lys Val Glu Met Ile
        35                  40                  45
Ile Phe Leu Asp Leu Asn Ile Lys Thr Ser Phe Gln Lys
    50                  55                  60
```

<210> 5778
<211> 203
<212> PRT
<213> S.epidermidis

<400> 5778

```
Asn Met Ile Glu Val Thr Phe Met Ser Thr Asn Asn Glu Ile Glu Phe
1               5                   10                  15
Lys Gln Ile Leu Asn Gln Asp Thr Tyr Ser Lys Ile Tyr Glu Leu Tyr
            20                  25                  30
Phe Lys Asn Gln Ser Pro Phe Lys Gln Thr Asn Phe Tyr Ile Asp Thr
        35                  40                  45
Glu Asn Phe Lys Leu Lys Gln His Gln Ala Ala Leu Arg Ile Arg Val
    50                  55                  60
Lys Asp Tyr Met Tyr Glu Met Thr Leu Lys Val Pro Ala Glu Val Gly
65                  70                  75                  80
Leu Thr Glu Tyr Asn His Ser Val Asn Ile Glu Pro Lys Leu Asp Met
                85                  90                  95
Ser Leu Gln Leu Ser Gln Leu Pro Asn Asp Ile Arg Asn Ile Leu Glu
            100                 105                 110
Gln Asp Phe Asn Ile Leu Glu Asn Glu Leu Lys Val Leu Gly Asn Leu
            115                 120                 125
Thr Thr Tyr Arg Leu Glu Thr Glu Tyr Gln Asn Glu Leu Leu Val Leu
        130                 135                 140
Asp Lys Ser Glu Tyr Leu Gly Lys Thr Asp Tyr Glu Leu Glu Phe Glu
145                 150                 155                 160
Val His Ser Tyr Asp Glu Gly Tyr Ser Lys Phe Lys Ser Leu Leu Gln
                165                 170                 175
His Phe Asn Leu Gln His Gln Lys Pro Leu Asn Lys Val Gln Arg Phe
            180                 185                 190
Phe Gln Glu Lys Gln Asn Ala Ser Asp Lys Asp
```

195   200

<210> 5779
<211> 332
<212> PRT
<213> S.epidermidis

<400> 5779
Trp Gly Glu Glu Met Leu Met Ala Ile Asn Gln Gln Gly Gln Lys Ile
1   5   10   15
Leu Ala Gln His Ala Asn Lys Phe Asp Lys Tyr Gln Cys Pro His Cys
            20   25   30
Lys Ser Glu Val Ile Leu Lys Gln Gly Met Thr Leu Ile Ala His Phe
        35   40   45
Ala His Lys Thr Arg Phe Asn His Arg Cys Ser Lys Ser Glu Ser Val
        50   55   60
Glu His Tyr Glu Ala Lys Leu Tyr Leu Ala Arg Ile Tyr Lys Ala Leu
65   70   75   80
Asn Phe Asn Val Glu Ile Glu Pro Tyr Tyr Lys Glu Val Leu Gln Tyr
                85   90   95
Pro Asp Ile Val Ile Asn Gln Glu Asn Ala Ile Glu Val Gln Phe Ser
            100   105   110
Lys Ile Ser Ile Ser Lys Ile Ile Arg Arg Thr Thr Gly Leu Lys Arg
        115   120   125
Ile Gly Leu Asn Val Ile Trp Ile Ile Lys Asp Val Pro Leu Lys Tyr
        130   135   140
Lys Tyr Val Lys Leu Ser Pro Phe Gln Ser Ala Phe Ile His Pro Ile
145   150   155   160
Asn Arg Thr Leu Val Thr Trp Asp Ser Lys Lys Phe Val Leu Ile Leu
                165   170   175
Tyr Ser Gln Leu Gln His Val Gly Gly Lys Asn Phe Val Ala Gln Arg
                180   185   190
Lys Val Leu Lys Phe Glu Asp Ile Ile Asn Met Thr Phe Gln Ser Asn
        195   200   205
Asn Val Pro Asn Phe Arg Leu Ser Ala Ser Asn Ile Gln Arg Tyr Ile
        210   215   220
Asn Tyr Cys Arg Lys Arg His Ser Val Leu Glu Pro Thr Leu Ser Ala
225   230   235   240
Met Tyr Gln Leu Asn Met Tyr Asp Ser Asp Val Ile Cys Lys Leu Gly
                245   250   255
Tyr Val Val Pro His Gln Ile Tyr Leu Ile Thr His Pro Ile Glu Trp
            260   265   270
Gln Leu Lys Tyr Leu Leu Leu Arg Arg Thr Leu Asn Asp Asn Glu Leu
        275   280   285
Cys Lys Gln Leu Leu Ser Gln Val Lys Phe Arg Val Phe Ala Thr Phe
        290   295   300
Gln Tyr Asp Lys Arg Gln Ile Leu Ser Thr Ile Leu Arg Glu Phe Asp
305   310   315   320
Tyr Leu Tyr Glu His Glu Ser Leu Asn Val Gln Lys
                325   330

<210> 5780
<211> 871
<212> PRT
<213> S.epidermidis

<400> 5780

```
Asn Asn Leu Asp Ile Asn Gln Met Thr Tyr Ala Val Gln Gly Ala Leu
1               5                   10              15
Gln Lys Ala Val Ala Tyr Ser Lys Glu Tyr Glu Leu Gln Asn Ile Glu
                20              25              30
Val Glu Ala Leu Leu Lys Ala Ala Met Asn Glu Asn Asp Ser Leu Phe
            35              40              45
Lys Ser Ile Leu Glu Arg Ala Asn Ile Asp Val Asp Gln Leu Ile Lys
        50              55              60
Ala Tyr Asp Asn Gln Leu Ser His Tyr Pro Thr Val Gln Gly Asp Asn
65              70              75              80
Val Gln Tyr Gly Gln Tyr Ile Ser Ala Lys Thr Asn Glu Leu Leu Asp
            85              90              95
Lys Ala Glu Lys Tyr Met Lys Ser Tyr Glu Asp Glu Phe Ile Ser Met
            100             105             110
Glu His Ile Leu Arg Ala Ala Ile Asp Thr Asp Glu Thr Thr Gln Lys
        115             120             125
Trp Val Gly Asn Lys Val Glu Val Ile Lys Glu Ile Ile Thr Lys Val
    130             135             140
Arg Gly Gly Asn His Val Thr Ser Gln Asn Pro Glu Val Asn Tyr Glu
145             150             155             160
Ala Leu Glu Lys Tyr Gly Arg Asp Leu Val Glu Glu Val Arg Gln Gly
            165             170             175
Lys Met Asp Pro Val Ile Gly Arg Asp Glu Glu Ile Arg Asn Thr Ile
            180             185             190
Arg Ile Leu Ser Arg Lys Thr Lys Asn Asn Pro Val Leu Ile Gly Glu
        195             200             205
Pro Gly Val Gly Lys Thr Ala Ile Val Glu Gly Leu Ala Gln Arg Ile
    210             215             220
Val Arg Lys Asp Val Pro Glu Ser Leu Leu Asp Lys Thr Ile Phe Glu
225             230             235             240
Leu Asp Leu Ser Ala Leu Val Ala Gly Ala Lys Tyr Arg Gly Glu Phe
            245             250             255
Glu Glu Arg Leu Lys Ala Val Leu Lys Glu Val Lys Glu Ser Glu Gly
            260             265             270
Arg Ile Ile Leu Phe Ile Asp Glu Ile His Met Leu Val Gly Ala Gly
        275             280             285
Lys Thr Asp Gly Ala Met Asp Ala Gly Asn Met Leu Lys Pro Met Leu
    290             295             300
Ala Arg Gly Glu Leu His Cys Ile Gly Ala Thr Thr Leu Asn Glu Tyr
305             310             315             320
Arg Glu Tyr Ile Glu Lys Asp Ser Ala Leu Glu Arg Arg Phe Gln Lys
            325             330             335
Val Gly Val Ser Glu Pro Asp Val Glu Asn Thr Ile Ser Ile Leu Arg
            340             345             350
Gly Leu Lys Glu Arg Tyr Glu Val Tyr His Gly Val Arg Ile Gln Asp
        355             360             365
Arg Ala Leu Val Ala Ala Ala Glu Leu Ser Asp Arg Tyr Ile Thr Asp
370                 375             380
Arg Phe Leu Pro Asp Lys Ala Ile Asp Leu Val Asp Gln Ala Cys Ala
385             390             395             400
Thr Ile Arg Thr Glu Met Gly Ser Asn Pro Thr Glu Leu Asp Gln Val
            405             410             415
Asn Arg Arg Val Met Gln Leu Glu Ile Glu Glu Ser Ala Leu Lys Asn
            420             425             430
Glu Ser Asp Asn Ala Ser Lys His Arg Leu Glu Glu Leu Gln Glu Glu
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               435                   440                   445
Leu Ser Asn Glu Lys Glu Lys Gln Ser Ser Leu Lys Ser Arg Val Glu
    450                   455                   460
Gln Glu Lys Glu Lys Ile Ala Lys Val Gln Glu Lys Arg Ala Glu Leu
465                   470                   475                   480
Asp Ser Ser Arg Gln Ala Leu Glu Asp Ala Gln Thr Glu Gly Asn Leu
                  485                   490                   495
Glu Lys Ala Ala Glu Leu Gln Tyr Gly Thr Ile Pro Gln Leu Glu Lys
                  500                   505                   510
Glu Leu Gln Glu Phe Glu Glu Ala Phe Gln Asp Glu Thr Gly Glu Asp
                  515                   520                   525
Ser Glu Arg Met Ile Arg Glu Val Val Ser Asp Glu Glu Ile Gly Asp
    530                   535                   540
Ile Val Ser Gln Trp Thr Gly Ile Pro Val Ser Lys Leu Val Glu Thr
545                   550                   555                   560
Glu Arg Glu Lys Leu Leu Ser Leu Ser Asp Ile Leu His Lys Arg Val
                  565                   570                   575
Val Gly Gln Asp Lys Ala Val Asp Leu Val Ser Asp Ala Val Val Arg
                  580                   585                   590
Ala Arg Ala Gly Ile Lys Asp Pro Asn Arg Pro Ile Gly Ser Phe Leu
                  595                   600                   605
Phe Leu Gly Pro Thr Gly Val Gly Lys Thr Glu Leu Ala Lys Ser Leu
    610                   615                   620
Ala Ser Ser Leu Phe Asp Ser Glu Lys His Met Ile Arg Ile Asp Met
625                   630                   635                   640
Ser Glu Tyr Met Glu Lys His Ala Val Ser Arg Leu Ile Gly Ala Pro
                  645                   650                   655
Pro Gly Tyr Val Gly His Asp Glu Gly Gly Gln Leu Thr Glu Ala Val
                  660                   665                   670
Arg Arg Asn Pro Tyr Ser Val Ile Leu Leu Asp Glu Val Glu Lys Ala
                  675                   680                   685
His Ser Asp Val Phe Asn Val Leu Leu Gln Ile Leu Asp Glu Gly Arg
    690                   695                   700
Leu Thr Asp Ser Lys Gly Arg Ser Val Asp Phe Lys Asn Thr Ile Ile
705                   710                   715                   720
Ile Met Thr Ser Asn Ile Gly Ser Gln Val Leu Leu Glu Asn Val Lys
                  725                   730                   735
Asp Ala Gly Glu Ile Ser Asp Asp Thr Glu Lys Ala Val Met Asp Ser
                  740                   745                   750
Leu His Ala Tyr Phe Lys Pro Glu Ile Leu Asn Arg Met Asp Asp Ile
    755                   760                   765
Val Leu Phe Lys Pro Leu Ser Val Asp Asp Met Ser Met Ile Val Asp
    770                   775                   780
Lys Ile Leu Thr Gln Leu Asn Met Arg Leu Leu Asp Gln His Ile Ser
785                   790                   795                   800
Ile Glu Val Thr Glu Glu Ala Lys Lys Trp Leu Gly Glu Glu Ala Tyr
                  805                   810                   815
Glu Pro Gln Phe Gly Ala Arg Pro Leu Lys Arg Phe Val Gln Arg Gln
                  820                   825                   830
Ile Glu Thr Pro Ile Ala Arg Met Met Ile Lys Glu Ser Leu Pro Glu
                  835                   840                   845
Gly Thr Ile Ile Lys Val Asp Leu Asn Asp Asn Lys Glu Leu Asp Phe
    850                   855                   860
Lys Val Val Lys Pro Thr Ser
865                   870
```

<210> 5781
<211> 45
<212> PRT
<213> S.epidermidis

<400> 5781
Thr Cys Leu Asp Thr Ile Thr Tyr Asp Leu Tyr Leu Leu Lys Tyr Glu
1   5   10   15
His His Ile Ile Pro Lys Lys Lys Thr Lys Met Asn Ser Lys Asn Ser
            20   25   30
Phe Trp Ser Phe Tyr Met Lys Ile Ile Ser Ser Phe Ser
            35   40   45

<210> 5782
<211> 209
<212> PRT
<213> S.epidermidis

<400> 5782
Asn Lys Met Asp Tyr Val Tyr Thr Ile Tyr Lys Asn Pro Arg Tyr Asn
1   5   10   15
Ile Ile Gln Lys Asp Asn Arg Tyr Leu Met Val Asp Leu Glu Gln Asn
            20   25   30
Trp Tyr Ser Tyr Leu Cys Pro Met Leu Asn Trp Phe Ile Pro Ile Lys
            35   40   45
Phe Thr Glu Leu Thr Tyr Gln Glu Phe Asn Asn Ile Asn Ile Phe His
        50   55   60
Asn Gly Gly Gln Lys Ser His Gly Met Met Ala Ala Gly Val Gly Val
65   70   75   80
Thr Ile Ser Val Leu Leu Arg Ser Leu Val Gly Tyr Ile Asp Ile Asn
                85   90   95
Ile Ser Arg Ile Trp Ile Val Phe Met Phe Leu Ile Gly Phe Val Ala
            100   105   110
Val Ile Thr Leu Arg Leu Ser Ile Arg Lys Lys Leu Asn His Pro Ala
            115   120   125
Phe Asn Lys Lys Ser Lys Gln Lys Val Ile Leu Ile Pro Ser Phe Lys
        130   135   140
Asn Met Ile Leu Val Val Phe Cys Tyr Phe Met Met Leu Phe Phe Ser
145   150   155   160
Ile Ala Pro Phe Gln Met Ile Phe Glu Glu Lys Lys Asn Ile Leu Gly
                165   170   175
Tyr Ile Leu Trp Val Gly Val Leu Phe Ile Phe Thr Thr Leu Asn Met
            180   185   190
Ala Ser Ile Ser Asp Arg Lys Val His Ala Lys Ile Lys Asn Ile Arg
        195   200   205
Arg

<210> 5783
<211> 462
<212> PRT
<213> S.epidermidis

<400> 5783
Asn Ser Glu Glu Lys Glu Val Lys Lys Met Asp Val Asn Val Asp Glu
1   5   10   15

Gln Ala Ile Val Asp Lys Leu Tyr Glu Ser Thr Lys Asp Trp Val Ser
            20   25   30
Val Glu Val Glu Leu Asn Lys Thr Met Lys Pro Ser Val Leu Phe His
            35   40   45
Leu Thr Glu Lys Asp Ala Gly Asp Arg Phe Tyr Met Arg Leu Asn Asp
            50   55   60
Asn Tyr Ser Ser Tyr Phe Gly Tyr His Ala Ile His Arg Phe Lys Asn
65   70   75   80
Asp Phe Glu Asn Lys Gln Ser Ile Phe Lys Asp Trp Glu Lys Leu Lys
                85   90   95
Asn Asn Ile Glu Leu Ile His Pro His Asn Lys Tyr His His Leu Arg
            100   105   110
Leu Cys Gly Gly Phe Gln Phe Ser Ser His Lys Ser Asp Asp Glu Trp
            115   120   125
Arg Glu Tyr Gly Leu Asn His Phe Val Leu Pro Lys Val Leu Ile Ser
            130   135   140
Asn Glu Gly Thr Arg Thr Tyr Leu Thr Tyr Thr Thr Lys Arg Gln Asp
145   150   155   160
Phe Asp Leu Gln Ala Phe Lys Thr Leu Val Ala His Phe Glu Gln Thr
                165   170   175
Thr Met Asp Asn Pro Glu Glu Ala Leu Gly Asp Val Thr Arg Met Glu
            180   185   190
Asp Ile Tyr Lys Asp Asp Trp Arg Asp Leu Val Lys Glu Ala Ile Asp
            195   200   205
Thr Ile Asp Asp Asn Lys Lys Ile Val Leu Ala Arg Arg Arg Leu Val
            210   215   220
Lys Phe Asp Lys Lys Ile Asn Ile Pro Tyr Val Leu Asn Arg Ala Leu
225   230   235   240
Glu Asn Glu Lys Asn Ser Tyr Ile Phe Leu Leu Glu Ala Asn Gln Ser
                245   250   255
Ile Phe Phe Ser Gln Thr Pro Glu Gln Leu Ile Lys Val Glu Asp Gly
                260   265   270
Val Leu Ser Thr Lys Ala Val Ala Gly Thr Ile Lys Arg Thr His Asn
            275   280   285
Glu Gln Ile Asp Asn Lys Asn Ile Glu Ala Phe Leu Lys Asp Lys Lys
            290   295   300
Asn Leu Gly Glu His Arg Phe Val Val Glu Ser Ile Leu Asn Asp Ile
305   310   315   320
Glu Pro Phe Val Gln Asp Val Glu Tyr Asn Glu Thr Pro Asn Ile Leu
            325   330   335
Lys Asn Asp His Met Tyr His Leu Tyr Thr Glu Ile Lys Ala Asn Leu
            340   345   350
Asn Asp Lys Ser Tyr Ile Gly Leu Ile Asp Arg Leu His Pro Thr Pro
            355   360   365
Ala Leu Gly Gly Tyr Pro Lys Glu Glu Ala Leu Asp Phe Ile Glu Asn
            370   375   380
Lys Glu Phe Gly Thr Arg Gly Leu Tyr Gly Ala Pro Val Gly Tyr Ile
385   390   395   400
Asp Val Tyr Asp Asp Cys Glu Phe Ile Val Ala Ile Arg Ser Met Leu
                405   410   415
Ile Lys Glu Gln Gln Ala Thr Leu Tyr Ala Gly Cys Gly Ile Val Lys
            420   425   430
Asn Ser Asp Pro Asp Ser Glu Val Ala Glu Thr Ala Val Lys Phe Ser
            435   440   445
Pro Met Met Asn Ala Leu Gly Val Asp Asn Asn Asp Glu Ser
    450   455   460

<210> 5784
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5784
Ala His Thr Leu Asp Thr Phe Lys Pro Ile Val Val Trp Ala Trp Tyr
1   5   10   15
Thr His Lys Phe Gln Phe Arg Asn Lys Arg Leu Pro Asp Asp Leu Phe
            20   25   30
Ser Trp Ser Gly His Leu Leu Trp Ile Met Leu Leu
            35   40

<210> 5785
<211> 62
<212> PRT
<213> S.epidermidis

<400> 5785
Ile Gly Gly Phe Ile Asn Val His Lys Phe Leu Phe Asp Phe Val Ile
1   5   10   15
Ile Tyr Ala Ser Phe Ile Asn Asn Tyr Met Val Ile Leu Phe Lys Ser
            20   25   30
Leu Tyr Lys Phe Asn Gln Tyr Leu Ile Leu Tyr Ile Ile His Tyr Phe
            35   40   45
Tyr Ser Cys Phe Pro Tyr Phe Thr His Ser Arg Arg Asn Ile
        50   55   60

<210> 5786
<211> 127
<212> PRT
<213> S.epidermidis

<400> 5786
Tyr Val Lys Leu Val Trp Asn Lys Glu Glu Thr Ser Met Arg Ile Tyr
1   5   10   15
Ile Asn Glu Ile Lys Leu Lys Asp Asp Gly Val Tyr Cys Phe Ser Glu
            20   25   30
Glu Ser Thr Glu Gly Leu Glu Glu Val Gly Gln Met Leu Val Asp Ser
            35   40   45
Asp Asn Tyr Gly Phe Ala Tyr Leu Leu Asp Asp Gly Gln Ser Tyr Ser
        50   55   60
Tyr Leu Ile Phe Val Gln Glu Thr Trp Ser Met Leu His Glu Asn Arg
65   70   75   80
Asp Lys Arg Ile Ile Ile Asn Asn His Leu Glu Leu Lys His Phe Gln
                85   90   95
Glu Glu Leu Asp Tyr Val Leu Asn Asn Ile Glu Gly Asn Asn Asn Tyr
            100   105   110
Gly Lys Glu Phe Val Ser Ala Val Glu Lys Thr Phe Glu Leu Glu
            115   120   125

<210> 5787
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5787
Asp Lys Ile Cys Leu Asn Lys Leu Ile Arg Ser Asn Ser Val Arg Leu
1   5   10   15
Met Lys Leu Ile Ser Lys Lys Val Thr Cys Leu Thr Lys Phe Ile Ile
            20   25   30
Asn Arg Glu Glu Cys Asn Asn Glu Lys Lys Ile Lys
        35   40

<210> 5788
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5788
Ile Lys Ser Cys Lys Val Gly Ile Asp Ile Ser Ile Lys Asp Thr Pro
1   5   10   15
Lys Ile Ala Ile Thr Ile Lys Lys Val Ser His Ser Pro Ala Val Ile
            20   25   30
Ile Thr Gly Asn Ala Leu Leu Ile Phe Phe Gly
        35   40

<210> 5789
<211> 406
<212> PRT
<213> S.epidermidis

<400> 5789
Val Phe Ile Arg Lys Arg Arg Gly Asp Phe Met Thr Gln Ser Glu Lys
1   5   10   15
Ile Ile Asn Leu Thr Asn His Tyr Gly Ala His Asn Tyr Val Pro Leu
            20   25   30
Pro Ile Val Ile Ser Glu Ala Glu Gly Val Trp Val Lys Asp Pro Glu
        35   40   45
Gly Asn Thr Tyr Met Asp Met Leu Ser Ala Tyr Ser Ala Val Asn Gln
    50   55   60
Gly His Arg His Pro Arg Ile Ile Gln Ala Leu Lys Asp Gln Ala Asp
65   •   70   75   80
Lys Val Thr Leu Val Ser Arg Ala Phe His Ser Asp Asn Leu Gly Gln
                85   90   95
Trp Tyr Glu Lys Ile Cys Lys Leu Ala Gly Lys Asp Lys Ala Leu Pro
            100   105   110
Met Asn Thr Gly Ala Glu Ala Val Glu Thr Ala Leu Lys Ala Ala Arg
            115   120   125
Arg Trp Ala Tyr Asp Val Lys Gly Ile Glu Pro Asn Lys Ala Glu Ile
    130   135   140
Ile Ala Phe Asn Gly Asn Phe His Gly Arg Thr Met Ala Pro Val Ser
145   150   155   160
Leu Ser Ser Glu Ala Glu Tyr Gln Arg Gly Tyr Gly Pro Leu Leu Asp
                165   170   175
Gly Phe Arg Lys Val Glu Phe Gly Asp Val Asn Gln Leu Lys Ala Ala
            180   185   190
Ile Asn Lys Asn Thr Ala Ala Ile Leu Val Glu Pro Ile Gln Gly Glu
            195   200   205
Ala Gly Ile Asn Val Pro Pro Glu Gly Tyr Leu Lys Thr Ile Arg Glu
    210   215   220

Leu Cys Asp Glu His Gln Ile Leu Phe Ile Ala Asp Glu Ile Gln Ala
225   230   235   240
Gly Leu Gly Arg Ser Gly Lys Leu Phe Ala Thr Asp Trp Asp His Val
                245   250   255
Lys Pro Asp Val Tyr Ile Leu Gly Lys Ala Leu Gly Gly Gly Val Phe
                260   265   270
Pro Ile Ser Val Val Leu Ala Asp Asn Glu Val Leu Asp Val Phe Thr
                275   280   285
Pro Gly Ser His Gly Ser Thr Phe Gly Gly Asn Pro Leu Ala Ser Ala
                290   295   300
Val Ser Ile Ala Ala Ile Asp Val Ile Ile Asp Glu Asp Leu Pro Gly
305   310   315   320
Arg Ser Leu Glu Leu Gly Glu Tyr Phe Lys Ser Glu Leu Lys Lys Ile
                325   330   335
Glu His Pro Ser Ile Lys Glu Val Arg Gly Arg Gly Leu Phe Ile Gly
                340   345   350
Ile Glu Leu His Glu Ser Ala Arg Pro Tyr Cys Glu Ala Leu Lys Glu
                355   360   365
Gln Gly Leu Leu Cys Lys Glu Thr His Asp Thr Val Ile Arg Phe Ala
                370   375   380
Pro Pro Leu Val Ile Thr Lys Glu Glu Leu Asp Met Ala Leu Glu Lys
385   390   395   400
Ile Lys Ser Val Phe Ala
                405

<210> 5790
<211> 51
<212> PRT
<213> S.epidermidis

<400> 5790
Thr Pro Val Arg Asp Asn Ser Leu Ile Lys Asp Ala Tyr Asp Asn Ser
1   5   10   15
Asp Glu Ile Ser Glu Lys Ile Asn Cys Ile Ile Ile Ser Ala Thr Leu
                20   25   30
Val Ile Ile Pro Met Pro Met Glu Val Asn Asn Arg Leu Asp Ala Met
        35   40   45
Ser Leu Trp
    50

<210> 5791
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5791
Tyr Met Ser Arg Leu Ser Leu Arg Arg Gln Leu Thr Lys Arg Gly Gly
1   5   10   15
Ala Leu Ile Ala Asn His Phe Arg Ser His Asp His Ser Pro Gln
        20   25   30
Leu Leu Tyr Tyr Cys Ile Ile Tyr Ser Leu Asp Met
        35   40

<210> 5792
<211> 96
<212> PRT

<213> S.epidermidis

<400> 5792
```
Phe Val Ile Arg Lys Ala Ser Tyr Gly Gln Thr Pro His Val His Phe
1               5                   10                  15
Glu Ile Val Pro Ile Thr Glu Asp Gly Arg Leu Ser Ala Lys Asp Val
            20                  25                  30
Val Gly Asn Lys Lys Ala Leu Ala Ser Phe Gln Asp Lys Phe Asn Glu
        35                  40                  45
Tyr Val Asn Glu Arg Gly Tyr Glu Leu Glu Gln Gly Thr Ser Arg Glu
    50                  55                  60
Leu Thr Asn Arg Gln His Asp Gln Val Asn Ser Tyr Lys Gln Lys Thr
65                  70                  75                  80
Glu Tyr His Lys Lys Glu Tyr Glu Arg Arg Tyr Lys Ile Gln Pro Ile
                85                  90                  95
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<210> 5793
<211> 454
<212> PRT
<213> S.epidermidis

<400> 5793
```
Lys Gly Ile Arg Val Ser Ile Ser Tyr Ile Tyr Lys Gly Glu Thr Ala
1               5                   10                  15
Met Asn Lys Ile Ile Ile Val Gly Ala Val Ala Gly Gly Ala Thr Cys
            20                  25                  30
Ala Ser Gln Ile Arg Arg Leu Asp Lys Glu Ser Glu Ile Ile Val Phe
        35                  40                  45
Glu Lys Asp Arg Asp Met Ser Phe Ala Asn Cys Ala Leu Pro Tyr Tyr
    50                  55                  60
Ile Gly Asn Val Ile Glu Asp Arg Arg Lys Val Leu Ala Tyr Thr Pro
65                  70                  75                  80
Asn Gln Phe Tyr Asp Lys Lys Gln Ile Thr Val Lys Thr Tyr His Glu
                85                  90                  95
Val Ile Gln Ile Asn Asp Glu Arg Gln Lys Val Thr Val Leu Asn His
                100                 105                 110
Gln Thr Asn Gln Thr Phe Glu Glu Ser Tyr Asp Thr Leu Ile Leu Ser
            115                 120                 125
Pro Gly Ala Ser Ala Asn Arg Leu Asn Thr His Ser Asp Ile Ser Phe
        130                 135                 140
Thr Val Arg Asn Leu Glu Asp Thr Glu Thr Ile Asp Thr Phe Ile Thr
145                 150                 155                 160
Asn Thr Lys Ala Gln Arg Ala Leu Val Val Gly Ala Gly Tyr Ile Ser
            165                 170                 175
Leu Glu Val Leu Glu Asn Leu His His Arg Gly Leu Asp Val Thr Trp
            180                 185                 190
Ile His Arg Ser Thr Asn Ile Asn Lys Leu Met Asp Gln Asp Met Asn
            195                 200                 205
Gln Pro Ile Ile Asp Glu Ile Glu Lys Arg Asn Ile Thr Tyr Arg Phe
        210                 215                 220
Asn Glu Glu Ile Ser His Val Asn Gly His Glu Val Thr Phe Thr Ser
225                 230                 235                 240
Gly Lys Val Glu Asn Phe Asp Leu Ile Ile Glu Gly Val Gly Thr His
            245                 250                 255
Pro Asn Ser Gln Phe Ile Lys Ser Ser Asn Val Ile Leu Asn Asp Lys
        260                 265                 270
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Gly Tyr Ile Pro Val Asn His Asn Phe Gln Thr Asn Ile Pro Asn Ile
        275                 280                 285
Tyr Ala Leu Gly Asp Val Ile Thr Ser His Tyr Arg His Val Asn Leu
        290                 295                 300
Pro Ala Gln Val Pro Leu Ala Trp Gly Ala His Arg Gly Ala Ser Ile
305                 310                 315                 320
Ile Ala Glu Gln Leu Ser Gly Asn Ser Ser Ile His Phe Lys Gly Tyr
                325                 330                 335
Leu Gly Asn Asn Ile Val Lys Phe Phe Asp Tyr Thr Leu Ala Ser Val
                340                 345                 350
Gly Ile Lys Pro Asn Glu Leu Lys Asn Phe Asp Tyr Asp Met Val Glu
        355                 360                 365
Val Lys Gln Gly Ala His Ala Gly Tyr Tyr Pro Gly Asn Ser Pro Leu
        370                 375                 380
His Leu Arg Val Tyr Phe Glu Lys Asp Ser Arg Lys Leu Ile Arg Ala
385                 390                 395                 400
Ala Ala Val Gly Lys Gln Gly Ala Asp Lys Arg Ile Asp Val Leu Ser
                405                 410                 415
Met Ala Met Met Asn Asn Ala Thr Val Asp Asp Leu Thr Glu Phe Glu
                420                 425                 430
Val Ala Tyr Ala Pro Pro Tyr Ser His Pro Lys Asp Leu Ile Asn Leu
        435                 440                 445
Ile Gly Tyr Lys Ala Gln
        450


<210> 5794
<211> 43
<212> PRT
<213> S.epidermidis


<400> 5794
Ala Thr Pro Arg Leu Ala Asp Thr Val Asn Leu Leu Leu Val Pro Pro
1                 5                 10                  15
Asp Gly Leu Glu Gly Cys Asp Gly Phe Val Asp Val Val Pro Gln Gly
                20                  25                  30
Ala Thr Cys Phe Val Leu Ile Lys Tyr Phe Ser
        35                  40


<210> 5795
<211> 164
<212> PRT
<213> S.epidermidis


<400> 5795
Lys Ala Met Arg Tyr Val Tyr Gly Ser Glu Lys Val Leu Pro Leu Ser
1                 5                 10                  15
Lys Lys Thr Ser His His Ala Arg Ile Tyr Ile Gly Gln Pro Thr Lys
                20                  25                  30
Ile Phe Asn Thr Arg Arg Cys Phe Leu Met Ser Ser Asp Thr Asn Gly
                35                  40                  45
Leu Ala His Thr Lys Trp Asn Cys Lys Tyr His Ile Val Phe Ala Pro
        50                  55                  60
Lys Tyr Arg Arg Gln Val Ile Tyr Gly Lys Ile Lys Arg Asp Ile Gly
65                  70                  75                  80
Val Ile Leu Arg Gln Leu Cys Glu Arg Lys Gly Val Glu Ile Ile Glu
                85                  90                  95
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Ala Glu Ala Cys Lys Tyr Pro Val Gly Val Val Glu Asp Gln Ile Tyr
            100                 105                 110
Tyr Phe Asn Glu Asp Asn Ile Asp Asn Val Ile Phe Glu Gly Tyr Ser
            115                 120                 125
Asp Gln Asp Glu Thr Arg Phe Gln Glu Leu Phe Lys Glu Met Met Gly
        130                 135                 140
Asn Leu Asp Glu Asp Ile Lys Arg Gly Thr Val Gln Gln Lys Asp Ser
145                 150                 155                 160
Tyr Gly Leu Ile
```

<210> 5796
<211> 500
<212> PRT
<213> S.epidermidis

<400> 5796
```
Lys Lys Glu Arg Tyr Ile Leu Asn Ala Ser Ala Leu Phe Lys Lys Ile
1               5                   10                  15
Arg Val Lys Asn Val Ile Gly Thr Leu Asp Ile Gln Val Asp Asp Ile
            20                  25                  30
Thr Thr Asp Ser Arg Thr Ala Lys Glu Gly Ser Leu Phe Val Ala Ser
            35                  40                  45
Lys Gly Tyr Thr Val Asp Ser His Lys Phe Cys Gln Asn Val Val Asp
        50                  55                  60
Gln Gly Cys Gly Ile Val Val Val Asn Arg Glu Leu Glu Leu Lys Gly
65                  70                  75                  80
Asn Val Thr Gln Val Val Val Pro Asp Thr Leu Arg Val Ala Ser Leu
            85                  90                  95
Leu Ala His Glu Leu Tyr Glu Phe Pro Ser His Gln Leu Thr Thr Tyr
            100                 105                 110
Gly Val Thr Gly Thr Asn Gly Lys Thr Ser Ile Ala Thr Met Ile His
            115                 120                 125
Leu Ile Tyr Arg Lys Leu Asn Lys Asn Ser Ala Tyr Leu Gly Thr Asn
        130                 135                 140
Gly Phe Gln Val Asn Glu Thr Lys Thr Lys Gly Ala Asn Thr Thr Pro
145                 150                 155                 160
Glu Thr Val Ala Leu Thr Lys Lys Ile Lys Glu Ala Val Asp Ala Asn
            165                 170                 175
Ala Glu Ala Met Thr Met Glu Val Ser Ser His Gly Leu Ala Leu Gly
            180                 185                 190
Arg Leu Arg Gly Val Glu Phe Asp Val Ala Ile Phe Ser Asn Leu Thr
            195                 200                 205
Gln Asp His Leu Asp Phe His Gly Thr Met Glu Ala Tyr Gly His Ala
        210                 215                 220
Lys Ser Leu Leu Phe Ser Gln Leu Gly Glu Asp Leu Ser Lys Glu Lys
225                 230                 235                 240
Tyr Val Val Leu Asn Asn Asp Asp Asp Phe Ser Asp Tyr Leu Ala Ser
            245                 250                 255
Val Thr Pro Tyr Glu Val Phe Thr Tyr Gly Ile Thr His Glu Ala Gln
            260                 265                 270
Phe Met Ala Lys Asn Ile Lys Glu Ser Leu Gln Gly Val Glu Phe Glu
            275                 280                 285
Phe Cys Thr Pro Phe Gly Ser Phe Pro Val Lys Ser Pro Tyr Val Gly
            290                 295                 300
Arg Phe Asn Ile Ser Asn Ile Met Ala Ala Met Ile Ala Val Trp Ser
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305                     310                     315                     320
Lys Gly Thr Asn Leu Asn Glu Ile Ile Asn Ala Val Thr Glu Leu Glu
                325                     330                     335
Pro Val Glu Gly Arg Leu Glu Val Leu Asp Pro Ser Leu Pro Ile Asp
                340                     345                     350
Leu Ile Ile Asp Tyr Ala His Thr Ala Asp Gly Met Asn Lys Leu Ile
                355                     360                     365
Asp Ala Val Gln Pro Phe Val Lys Gln Lys Leu Ile Phe Leu Val Gly
        370                     375                     380
Met Ala Gly Glu Arg Asp Leu Thr Lys Thr Pro Glu Met Gly Arg Val
385                     390                     395                     400
Ala Cys Arg Ala Asp Tyr Val Ile Phe Thr Pro Asp Asn Pro Ala Asn
                405                     410                     415
Asp Asp Pro Lys Met Leu Thr Ala Glu Leu Ala Lys Gly Ala Thr His
                420                     425                     430
Asn Asn Tyr Ile Glu Phe Asp Asp Arg Ala Glu Gly Ile Arg His Ala
                435                     440                     445
Ile Asp Ile Ala Glu Pro Gly Asp Thr Val Val Leu Ala Ser Lys Gly
        450                     455                     460
Arg Glu Pro Tyr Gln Ile Met Pro Gly His Val Lys Val Pro His Arg
465                     470                     475                     480
Asp Asp Leu Ile Gly Leu Lys Ala Ala Tyr Gln Lys Phe Gly Gly Gly
                485                     490                     495
Pro Leu Glu Asp
        500


<210> 5797
<211> 593
<212> PRT
<213> S.epidermidis

<400> 5797
Arg Asn Tyr Arg Ser Gly Leu Leu Val Asp Asn Asn Lys Lys Gln Val
1               5                       10                      15
Ile Pro Arg Ser Gln Tyr Arg Arg Lys Arg Arg Glu Tyr Phe His Asn
                20                      25                      30
Val Glu Arg Glu Glu Arg Ile Arg Arg Glu Lys Ile Glu Lys Glu Asn
        35                      40                      45
Gln Ala Lys Arg Glu Gln His Gln Thr Lys Val Asn Glu Glu Arg Val
        50                      55                      60
Lys Asp Asn Leu Arg Lys Ala Arg Ile Glu Lys Leu Thr Gln Glu Glu
65                      70                      75                      80
Ile His Gln Gln Arg Asp Asp Lys Ser Tyr Lys Gln Lys Thr Leu Asn
                85                      90                      95
Gln Asn Asn Gln Met Asn Lys Ser Lys Asp Asp Asn Lys Ile Gly
                100                     105                     110
Glu Glu Ser Leu His Asp Val Arg Val Ser Ser Asp Thr Ser Thr Leu
        115                     120                     125
Pro His Gln Asn Lys Ser Ile Lys Asp Tyr Asp Asp Ser Gly Asn Glu
        130                     135                     140
Ser Lys Gln His Thr Lys Leu Thr Ser Lys Glu Ser Met Leu Gly Val
145                     150                     155                     160
Asn Ser Asn His Thr Glu Gln Asp Ser Arg Ser Thr Gln Pro Tyr Ser
                165                     170                     175
Ser Lys His Ser Tyr Ser Gln Pro Lys Asp Lys Asp Asn Asp Asn Thr
        180                     185                     190
```

```
Gln Gln Ala Gln Phe Leu Lys Lys Glu Asp Lys Gln Arg Asn Arg Ala
        195                 200                 205
Glu Asn Ile Lys Lys Val Asn Glu Phe Lys Gln Leu Val Val Ala Phe
        210                 215                 220
Phe Lys Glu His Trp Pro Lys Met Leu Ile Ile Ile Gly Ile Ile Val
225                 230                 235                 240
Leu Leu Leu Ile Leu Asn Ala Ile Phe Thr Thr Val Asn Lys Asn Asp
                245                 250                 255
His Thr Asn Asp Ser Ala Phe Asn Gly Thr Ala Lys Asp Glu Thr Thr
        260                 265                 270
Ala Met Lys Ile Ala Glu Asn Ser Val Lys Ser Val Val Thr Val Glu
        275                 280                 285
Asn Asp Leu Ser Asn Asp Thr Thr Val Ser Asp Asn Lys Asn Glu Ser
        290                 295                 300
Asp Asn Glu Ile Gly Ser Gly Val Val Tyr Lys Lys Val Gly Asp Ser
305                 310                 315                 320
Ile Tyr Ile Phe Thr Asn Ala His Val Val Gly Asp Gln Glu Lys Gln
                325                 330                 335
Lys Val Thr Tyr Gly Asn Asp Lys Ser Val Thr Gly Lys Val Ile Gly
                340                 345                 350
Lys Asp Lys Trp Ser Asp Leu Ala Val Val Lys Ala Lys Val Ala Asp
        355                 360                 365
Glu Asn Ile Lys Pro Met Thr Met Gly Asp Ser Asn Asn Ile Lys Leu
        370                 375                 380
Ala Glu Pro Ile Leu Val Ile Gly Asn Pro Leu Gly Thr Asp Phe Lys
385                 390                 395                 400
Gly Ser Val Ser Gln Gly Ile Val Ser Gly Leu Asn Arg His Val Pro
                405                 410                 415
Val Asp Ile Asp Lys Asn Asp Asn Tyr Asp Ala Leu Met Lys Ala Phe
        420                 425                 430
Gln Ile Asp Ala Pro Val Asn Pro Gly Asn Ser Gly Gly Ala Val Val
        435                 440                 445
Asp Arg Asp Gly Arg Leu Ile Gly Ile Val Ser Leu Lys Ile Asp Met
        450                 455                 460
His Asn Val Glu Gly Met Ala Phe Ala Ile Pro Ile Asn Asp Val Arg
465                 470                 475                 480
Lys Ile Ala Lys Glu Leu Glu His Lys Gly Lys Val Asn Tyr Pro Asn
                485                 490                 495
Thr Glu Ile Lys Ile Lys Asn Val Gly Asp Leu Asp Asp Ser Glu Arg
        500                 505                 510
Asn Ala Ile Asn Leu Pro Ala Lys Val Asn His Gly Val Leu Ile Gly
        515                 520                 525
Glu Val Lys Glu Asn Gly Leu Gly Asp Lys Ala Gly Leu Lys Lys Gly
        530                 535                 540
Asp Val Ile Val Glu Leu Asp Gly Lys Lys Ile Glu Asp Asn Leu Arg
545                 550                 555                 560
Tyr Arg Gln Val Ile Tyr Ser His Tyr Asp Asp Gln Lys Thr Ile Thr
                565                 570                 575
Ala Lys Ile Tyr Arg Asn Gly Ala Glu Lys Asn Ile Lys Ile Lys Leu
        580                 585                 590
Lys
```

<210> 5798
<211> 317
<212> PRT

<213> S.epidermidis

<400> 5798
```
Arg Gly Trp Leu Leu Met Ser Asn Glu Asn Val Leu Leu Gln Val Lys
1               5                   10                  15
Asn Leu Lys Gln Tyr Phe Asn Gln Gly Lys His Asn Glu Val Lys Ala
            20                  25                  30
Ile Asp Asn Ile Ser Phe Asp Val Tyr Lys Gly Glu Thr Leu Gly Leu
            35                  40                  45
Val Gly Glu Ser Gly Cys Gly Lys Ser Thr Thr Gly Lys Ala Ile Ile
    50                  55                  60
Lys Leu Asn Asp Ile Thr Asp Gly Ala Ile Glu Tyr Asp Gly Lys Asp
65                  70                  75                  80
Ile His Gln Ile Arg Lys Arg Lys Glu Arg Leu Lys Phe Asn Lys Lys
                85                  90                  95
Ile Gln Met Ile Phe Gln Asp Pro Tyr Ala Ser Leu Asn Pro Arg Leu
            100                 105                 110
Lys Val Met Asp Ile Val Ala Glu Gly Ile Asp Ile His Lys Leu Ala
            115                 120                 125
Ser Ser Gln Arg Asp Arg Lys Lys Arg Val Tyr Asp Leu Leu Glu Thr
    130                 135                 140
Val Gly Leu Gly Lys Glu His Ala Asn Arg Tyr Pro His Glu Phe Ser
145                 150                 155                 160
Gly Gly Gln Arg Gln Arg Ile Gly Ile Ala Arg Ala Leu Ala Val Glu
                165                 170                 175
Pro Glu Phe Ile Ile Ala Asp Glu Pro Ile Ser Ala Leu Asp Val Ser
            180                 185                 190
Ile Gln Ala Gln Val Val Asn Leu Leu Leu Lys Leu Gln Arg Glu Arg
            195                 200                 205
Asp Ile Thr Leu Leu Phe Ile Ala His Asp Leu Ser Met Val Lys Tyr
    210                 215                 220
Ile Ser Asp Arg Ile Ala Val Met His Phe Gly Lys Ile Val Glu Ile
225                 230                 235                 240
Gly Pro Ala Asp Asp Ile Tyr Asn Tyr Pro Leu His Asp Tyr Thr Lys
                245                 250                 255
Ser Leu Leu Ser Ala Ile Pro Gln Pro Asp Pro Asp Val Glu Arg Asn
            260                 265                 270
Arg Gln Arg Val Leu Tyr His Glu Asp Ala Thr Leu Asn Glu Glu Arg
            275                 280                 285
Gln Leu Asn Glu Ile Arg Pro Gln His Tyr Val Phe Ser Thr Gln Asn
    290                 295                 300
Glu Ala Val Lys Leu Lys Gln Lys Tyr Gly Leu Ser Val
305                 310                 315
```

<210> 5799
<211> 150
<212> PRT
<213> S.epidermidis

<400> 5799
```
Gly Lys Thr Ser Glu Asn Gly Gly Asp Thr Val Phe Gln Ile Ala Lys
1               5                   10                  15
Asn Gln Thr Met Leu Asp Asp Cys Phe Glu Ile Arg Lys Cys Val Phe
            20                  25                  30
Val Glu Glu Gln Gly Val Pro Leu Glu Asn Glu Phe Asp Gln Tyr Glu
            35                  40                  45
```

```
Asp Tyr Ser Phe His Ile Val Gly Tyr Ile Asn Gly Val Pro Met Ala
    50                      55                  60
Thr Ala Arg Ile Arg Pro Leu Asn Thr His Ile Cys Lys Ile Glu Arg
65                      70                  75                  80
Val Ala Ile Ile Lys Trp Tyr Arg Gly Leu Gly Tyr Gly Lys Asn Leu
                85                  90                  95
Ile His Ala Ile Glu Thr Ile Ala Lys Lys His Gln Tyr Asn Glu Leu
                100                 105                 110
Thr Met Asn Ala Gln Leu Gln Ala Arg Asp Phe Tyr Leu Lys Leu Gly
            115                 120                 125
Tyr Ser Pro Phe Gly Lys Val Phe Leu Glu Glu Asn Ile Asn His Ile
    130                 135                 140
Ser Met Asn Lys Phe Leu
145                 150
```

```
<210> 5800
<211> 103
<212> PRT
<213> S.epidermidis
```

```
<400> 5800
Cys Pro Arg Leu Phe Tyr Cys Lys His Arg Gln Gln Phe Asn Leu Lys
1                   5                   10                  15
Thr Arg Leu Ile Ser Ser Tyr Phe Asn Ile Cys Leu Asn Pro Glu Phe
                20                  25                  30
Gln Thr Glu Ile Leu Gln Thr Arg Gln Val Gly Val Arg Gly Pro Asn
            35                  40                  45
Ile Glu Asn Phe Lys Gln Lys Phe Tyr Arg Gln Gly Lys Leu Gly Phe
    50                  55                  60
Gly Val Cys Leu Asp Asn Ala Leu Ile Thr Tyr Ala Pro Leu Lys Pro
65                  70                  75                  80
Phe Ile Lys Ile Gln Ser Val Asn Lys Ile Asn Val Tyr Ser Phe Ile
                85                  90                  95
Tyr Ile Thr His Leu Ser Leu
                100
```

```
<210> 5801
<211> 49
<212> PRT
<213> S.epidermidis
```

```
<400> 5801
Gln Ile Leu Arg Phe Phe Glu Asp Asn Thr Lys Ile Val Gln Asn Val
1                   5                   10                  15
Phe Lys Phe Ser Phe Val Thr Leu Gln Pro Tyr Leu Ile Asn Asn Glu
                20                  25                  30
His Phe Ile Lys Gln Ile Tyr Asp Lys Ala Trp Tyr Cys Thr Pro Tyr
            35                  40                  45
Leu
```

```
<210> 5802
<211> 90
<212> PRT
<213> S.epidermidis
```

<400> 5802
```
Ser Val Ser Arg Val Ile Lys Ile Ala Gln Arg Ile Met Glu Asp Tyr
1               5                   10              15
Glu Cys Ile Lys Ser Val Ser Ala Leu Glu Asp Lys Glu Lys Glu Ile
            20                  25                  30
Arg Glu Lys Asp Asp Leu Leu Asn Lys Ala Val Gly Arg Ile Glu Asn
        35                  40                  45
Thr Tyr Asp Asn Phe Asn Arg Leu Tyr Glu Met Ala Lys Pro Phe Lys
        50                  55                  60
Glu Asn Val Glu Ile Ala Leu Lys Leu Leu Lys Ile Leu Leu Lys Glu
65                  70                  75                  80
Leu Met Lys Lys His Ile Cys Gly Lys Ser
                85                  90
```

<210> 5803
<211> 514
<212> PRT
<213> S.epidermidis

<400> 5803
```
Ile Glu Ser Arg Lys Thr Phe Ala Ile Ile Ser His Pro Asp Ala Gly
1               5                   10              15
Lys Thr Thr Leu Thr Glu Lys Leu Leu Tyr Phe Ser Gly Ala Ile Arg
            20                  25                  30
Glu Ala Gly Thr Val Lys Gly Lys Lys Thr Gly Lys Phe Ala Thr Ser
        35                  40                  45
Asp Trp Met Lys Val Lys Gln Glu Arg Gly Ile Ser Val Thr Ser Ser
        50                  55                  60
Val Met Gln Phe Asp Tyr Asp Asp Tyr Lys Ile Asn Ile Leu Asp Thr
65                  70                  75                  80
Pro Gly His Glu Asp Phe Ser Glu Asp Thr Tyr Arg Thr Leu Met Ala
                85                  90                  95
Val Asp Ser Ala Val Met Val Ile Asp Cys Ala Lys Gly Ile Glu Pro
            100                 105                 110
Gln Thr Leu Lys Leu Phe Lys Val Cys Lys Met Arg Gly Ile Pro Ile
        115                 120                 125
Phe Thr Phe Ile Asn Lys Leu Asp Arg Val Gly Lys Glu Pro Phe Glu
        130                 135                 140
Leu Leu Asp Glu Ile Glu Glu Thr Leu Asn Ile Asp Thr Tyr Pro Met
145                 150                 155                 160
Asn Trp Pro Val Gly Met Gly Gln Asn Phe Phe Gly Ile Ile Asp Arg
            165                 170                 175
His Ser Lys Thr Ile Glu Pro Phe Arg Asp Glu Glu Asn Leu Leu His
            180                 185                 190
Leu Asn Glu Asp Tyr Glu Leu Lys Glu Glu His Ala Ile Lys Asn Asp
        195                 200                 205
Ser Ala Phe Glu Gln Ala Ile Glu Glu Met Met Leu Val Asp Glu Ala
        210                 215                 220
Gly Glu Ala Phe Asp Asn Glu Ala Leu Leu Asn Gly Glu Leu Thr Pro
225                 230                 235                 240
Val Phe Phe Gly Ser Ala Leu Ala Asn Phe Gly Val Gln Asn Phe Leu
            245                 250                 255
Asn Ala Tyr Val Asp His Ala Pro Met Pro Asn Ala Arg Gln Thr Lys
            260                 265                 270
Glu Glu Val Asp Val Ser Pro Phe Asp Ile Asp Phe Ser Gly Phe Ile
        275                 280                 285
```

```
Phe Lys Ile Gln Ala Asn Met Asp Pro Lys His Arg Asp Arg Ile Ala
    290                 295                 300
Phe Met Arg Val Val Ser Gly Ala Phe Glu Arg Gly Met Asp Val Thr
305                 310                 315                 320
Leu Gln Arg Thr Asn Lys Lys Gln Lys Ile Thr Arg Ser Thr Ser Phe
                325                 330                 335
Met Ala Asp Asp Lys Glu Thr Val Asn His Ala Val Ala Gly Asp Ile
                340                 345                 350
Ile Gly Leu Tyr Asp Thr Gly Asn Tyr Gln Ile Gly Asp Thr Leu Val
                355                 360                 365
Gly Gly Lys Gln Lys Tyr Ser Phe Gln Glu Leu Pro Gln Phe Thr Pro
    370                 375                 380
Glu Ile Phe Met Lys Val Ser Ala Lys Asn Val Met Lys Gln Lys His
385                 390                 395                 400
Phe His Lys Gly Ile Glu Gln Leu Val Gln Glu Gly Ala Ile Gln Tyr
                405                 410                 415
Tyr Lys Thr Leu His Thr Asn Gln Ile Ile Leu Gly Ala Val Gly Gln
                420                 425                 430
Leu Gln Phe Glu Val Phe Glu His Arg Met Asn Asn Glu Tyr Asn Val
                435                 440                 445
Asp Val Val Met Glu Pro Val Gly Arg Lys Ile Ala Arg Trp Ile Glu
    450                 455                 460
Asn Glu Glu Asp Ile Lys Asp Asn Met Asn Thr Ser Arg Ser Ile Leu
465                 470                 475                 480
Val Lys Asp Arg Tyr Asp Asn Tyr Val Phe Leu Phe Glu Asn Glu Phe
                485                 490                 495
Ala Thr Arg Trp Phe Glu Glu Lys Phe Ser Asp Ile Lys Leu Tyr Ser
                500                 505                 510
Leu Leu
```

```
<210> 5804
<211> 161
<212> PRT
<213> S.epidermidis

<400> 5804
Lys Ala Gln Arg Phe Ala Lys Leu Lys Ser Ala Arg Arg Val Ile Ala
1               5                   10                  15
Ile Asp His Val Glu His Arg Leu Ala His Thr Glu Lys Tyr Asn Gly
                20                  25                  30
Ala Glu Val Tyr Asn Phe Leu Lys Glu Asp Asp Val Gly Lys Leu Leu
            35                  40                  45
His Glu Thr Thr Arg Gly Gly Ala Asp Val Val Ile Asp Cys Val Gly
            50                  55                  60
Ile Asp Glu Gln Val Val Gln Asp Asp Leu Glu Val Ser Ser Asn Ser
65                  70                  75                  80
Ile Gln Arg Gly Asn Ile Ser Pro Ile Val Thr Ala Thr Glu Ser Val
                85                  90                  95
Arg Lys Tyr Gly Thr Ile Gln Leu Ile Gly Val Tyr Gly Thr Ala Ala
            100                 105                 110
Asp Asn Ser Gln Leu Asp Leu Ile Phe Asn Arg Asn Val Gln Val Lys
            115                 120                 125
Ser Gly Gln Ala Pro Val Ile His Met Met Pro Lys Leu Tyr Asp Met
            130                 135                 140
Ile Lys Ile Lys Ser Leu Ile Gln Gln Lys Leu Ser Leu Ile Leu Cys
```

145   150   155   160
Leu

<210> 5805
<211> 44
<212> PRT
<213> S.epidermidis

<400> 5805
Pro Thr Lys Arg Pro His Lys Lys Asp Ala Leu Val Thr Gln Gly Asp
1   5   10   15
Leu Pro Val Phe Ile Leu Arg Trp Ala Tyr Gly Ile Lys Leu Pro Gln
            20   25   30
Gly Met Pro Lys Val Gly Leu Leu Thr Gly Arg Asn
            35   40

<210> 5806
<211> 73
<212> PRT
<213> S.epidermidis

<400> 5806
Ser Glu Leu Ser Thr Ser Ile Ile Ser Ala Leu Ile Tyr Leu Ala Thr
1   5   10   15
Val Ala Lys Thr Val Ala Asp Ser Ala Arg Glu Gly Lys Ile Ala Val
            20   25   30
Glu Lys Pro Ser His Pro Ala Thr Gly Asn His Ser Asn Leu Thr Ala
            35   40   45
Asn Thr Tyr Cys Asn Lys Thr Ala Lys Thr Asn Asp Gly Thr Asp Thr
        50   55   60
Ala Ile Thr Glu Ile Ile Val Val Val
65   70

<210> 5807
<211> 242
<212> PRT
<213> S.epidermidis

<400> 5807
Asp Asp Met Arg Ile Glu Arg Val Asp Asp Thr Thr Val Lys Leu Phe
1   5   10   15
Ile Thr Tyr Ser Asp Ile Glu Ala Arg Gly Phe Ser Arg Glu Asp Leu
            20   25   30
Trp Ser Asn Arg Lys Arg Gly Glu Glu Phe Phe Trp Ser Met Met Asp
            35   40   45
Glu Ile Asn Glu Glu Glu Asp Phe Val Val Glu Gly Pro Leu Trp Ile
        50   55   60
Gln Val His Ala Phe Glu Lys Gly Val Glu Val Thr Ile Ser Lys Ser
65   70   75   80
Lys Asn Glu Asp Ala Met Asn Met Ser Asp Asp Thr Asn His Gln
                85   90   95
Phe Asp Asp Gln Val Asn Glu Leu Leu Ala Gln Thr Leu Glu Gly Glu
            100   105   110
Glu Ser Leu Glu Asp Leu Phe Glu Gln Arg Lys Gln Gln Lys Lys Asn
            115   120   125

His Gln Asp Lys Gln Gln Arg Arg Ala His Lys Pro Ser Asn Val Arg
    130   135   140

Asn Ile Ile Val Lys Phe Asp Asp Leu Glu Gln Val Ile Asp Tyr Ala
145   150   155   160

Tyr His Asn Asn Gln Asn Thr Asp Glu Phe Glu Asp Leu Leu Tyr Met
          165   170   175

Ile Asp Asn Lys Tyr Tyr Tyr Ser Ile His Phe Asp Asp Ser Val Ser
         180   185   190

Gln Glu Met Ile Asn Asp Ser Tyr Ser Gln Leu Leu Glu Phe Ala Tyr
     195   200   205

Pro Thr Asp Lys Thr Asn Ile Tyr Leu Asn Asp Tyr Ala Lys Ile Ile
    210   215   220

Met Ser His Asn Val Thr Ser Gln Val Arg Lys Tyr Phe Thr Asp Thr
225   230   235   240

Asn Glu

<210> 5808
<211> 468
<212> PRT
<213> S.epidermidis

<400> 5808
Ile Cys Phe Gly Gly Val Asn Met Ser Asn Glu Thr Glu Met Lys Asp
1   5   10   15

Asn Val Arg Glu Asp Val Tyr Asp Lys Glu Leu Phe Asp Arg Leu Leu
        20   25   30

Asp Gln Asn Asp Ile Asp Glu Phe Arg Lys Glu Phe Leu Glu Leu His
     35   40   45

Asn Tyr Glu Gln Ser Glu Tyr Phe Glu Asp Thr Asp Asp Glu Asn Arg
     50   55   60

Gln Lys Ile Phe Glu Phe Leu Ser Pro Lys Glu Val Ala Asn Phe Phe
65   70   75   80

Asp Gln Leu Asp Phe Asp Asp Asp Asp Tyr Glu Ser Leu Phe Asp Asn
        85   90   95

Met Asp Ala Thr Tyr Ala Ser His Val Leu Glu Glu Met Ser Tyr Asp
        100   105   110

Asn Ala Val Asp Ile Leu Asn Glu Leu Ser Lys Pro Lys Val Ala Ser
     115   120   125

Leu Leu Thr Leu Met Asn Lys Asp Lys Ala Asn Glu Ile Lys Ala Leu
     130   135   140

Leu His Tyr Glu Glu Asp Thr Ala Gly Gly Ile Met Thr Thr Glu Phe
145   150   155   160

Ile Ser Leu Lys Ser Thr Thr Pro Val Lys Glu Ala Leu Ile His Val
        165   170   175

Lys Glu Gln Ala Pro Asp Ala Glu Thr Ile Tyr Val Ile Phe Ala Val
        180   185   190

Asn Glu Asp Glu Gln Leu Val Gly Val Leu Ser Leu Arg Asp Leu Ile
     195   200   205

Val Ala Glu Asn Asp Ala Tyr Ile Glu Asp Val Met Ser Glu Arg Val
     210   215   220

Ile Ser Ala Asn Val Gly Asp Asp Gln Glu Asp Ile Ala Gln Leu Met
225   230   235   240

Arg Asp Tyr Asp Phe Ile Ala Val Pro Val Val Asp Tyr Gln Asn His
        245   250   255

Leu Leu Gly Ile Ile Thr Ile Asp Asp Ile Leu Asp Val Met Asp Glu

```
            260                    265                    270
Glu Ala Ser Glu Asp Tyr Ser Arg Leu Ala Gly Val Ser Asp Ile Asp
        275                    280                    285
Ser Thr Ser Asp Ser Val Phe Lys Thr Ala Ser Lys Arg Leu Pro Trp
    290                    295                    300
Leu Ile Val Leu Thr Phe Leu Gly Met Ile Thr Ala Thr Ile Leu Gly
305                    310                    315                    320
Ser Phe Glu Asp Thr Leu Ser Gln Val Ala Leu Leu Ala Ala Phe Ile
                325                    330                    335
Pro Ile Ile Ser Gly Met Ser Gly Asn Ser Gly Thr Gln Ser Leu Ala
            340                    345                    350
Val Ser Val Arg Asn Ile Ser Thr Gly Glu Ile Asn Glu Gln Ser Lys
        355                    360                    365
Phe Lys Ile Ala Leu Arg Glu Ala Gly Ser Gly Leu Leu Ser Gly Ile
    370                    375                    380
Val Cys Ala Val Ile Leu Phe Leu Ile Ile Val Val Ile Phe Arg Gln
385                    390                    395                    400
Pro Leu Leu Ala Leu Ile Val Gly Gly Ser Leu Thr Cys Ala Met Thr
                405                    410                    415
Val Gly Thr Leu Val Gly Ser Met Ile Pro Leu Val Met Asn Lys Cys
            420                    425                    430
Lys Ile Asp Pro Ala Val Ala Ser Gly Pro Phe Ile Thr Thr Ile Asn
        435                    440                    445
Asp Ile Val Ser Met Leu Ile Tyr Phe Gly Leu Ala Thr Ser Phe Met
    450                    455                    460
Ser Tyr Leu Thr
465


<210> 5809
<211> 169
<212> PRT
<213> S.epidermidis


<400> 5809
Met Ile Leu Gly Leu Ala Leu Val Pro Ser Lys Ser Phe Gln Asp Glu
1               5                   10                  15
Val Asn Ala Tyr Arg Lys Arg Tyr Asp Asn His Tyr Ala Gln Ile Met
            20                  25                  30
Pro His Ile Thr Ile Lys Pro Gln Phe Glu Ile Asp Asp His Asp Phe
        35                  40                  45
Asn Leu Phe Lys Asn Glu Val Lys Asn Arg Ile Ser Ser Ile Lys Pro
    50                  55                  60
Val Glu Val His Ala Thr Lys Ala Ser Asn Phe Ala Pro Val Ser Asn
65                  70                  75                  80
Val Ile Tyr Phe Lys Val Ala Lys Thr Glu Ser Leu Glu Gln Leu Phe
                85                  90                  95
Asn Gln Phe Asn Thr Glu Asp Phe Tyr Gly Ile Ala Glu His Pro Phe
            100                 105                 110
Val Pro His Phe Thr Ile Ala Gln Gly Leu Thr Ser Gln Glu Phe Glu
        115                 120                 125
Asp Ile Tyr Gly Gln Val Lys Leu Ala Gly Val Asp His Arg Glu Ile
    130                 135                 140
Ile Glu Glu Leu Ser Leu Leu Gln Tyr Ser Glu Glu Glu Asp Lys Trp
145                 150                 155                 160
Thr Ile Ile Glu Thr Phe Thr Leu Gly
                165
```

<210> 5810
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5810
Asn Ile Lys Gly Ala Gly Thr Ile Asn Gly Leu Thr Tyr Arg Pro Ala
1   5   10   15
Leu Tyr Ile Gln Pro Leu Tyr Thr Cys Tyr Asn Gln Gly Ile Asn Phe
            20   25   30
Tyr Glu Gly Gly Phe Gln Glu Lys Ile Phe Lys His Leu Lys Glu Asn
        35   40   45
Phe Ser Gly Lys Ile Leu Arg
    50   55

<210> 5811
<211> 548
<212> PRT
<213> S.epidermidis

<400> 5811
Arg Met Lys Gly Phe Lys Val Leu Ile Ile Leu Leu Ser Val Cys Ile
1   5   10   15
Ile Leu Ser Ala Cys Ser Asn Lys Gln Ser Leu Tyr Ser Asp Gln Gly
            20   25   30
Gln Val Phe Arg Lys Val Ile Thr Gln Asp Met Thr Thr Leu Asp Thr
        35   40   45
Ala Leu Ile Thr Asp Ala Val Ser Gly Asp Ile Ala Ala Gln Ala Phe
        50   55   60
Glu Gly Leu Tyr Thr Leu Asn Lys Glu Asp Lys Ala Glu Pro Ala Ile
65   70   75   80
Ala Lys Ser Phe Pro Lys Lys Ser Asn Gly Gly Lys Thr Leu Thr Ile
                85   90   95
Asn Leu Arg Lys Asn Ala Lys Trp Ser Asn Gly Asp Ser Val Thr Ala
            100   105   110
Tyr Asp Phe Val Tyr Ala Trp Arg Lys Val Val Asn Pro Lys Thr Ala
        115   120   125
Ser Glu Phe Ala Tyr Ile Met Ser Asp Ile Lys Asn Ala Asp Glu Val
        130   135   140
Asn Ala Gly Lys Lys Ser Val Lys Asp Leu Gly Ile Thr Ala Ile Gly
145   150   155   160
Lys Tyr Lys Leu Gln Val Asp Leu Glu Arg Pro Val Pro Tyr Ile Asn
            165   170   175
Glu Leu Leu Ala Leu Asn Thr Phe Asn Pro Gln Asn Glu Lys Val Ala
            180   185   190
Lys Lys Phe Gly Glu Gln Tyr Gly Thr Thr Ala Glu Lys Ala Val Tyr
        195   200   205
Asn Gly Pro Phe Glu Val Thr Asn Trp Lys Val Glu Asp Lys Ile Gln
    210   215   220
Leu Val Lys Asn Glu Gln Tyr Trp Asp Lys Lys Asn Val Lys Leu Asp
225   230   235   240
Lys Val Asn Tyr Lys Val Leu Lys Asp Gln Gln Ala Gly Ala Ser Leu
            245   250   255
Tyr Asp Thr Gly Ser Val Asp Asp Thr Ile Ile Thr Ser Glu Gln Val
        260   265   270

```
Asp Lys Tyr Arg Gly Glu Ser Ala Leu Asn Tyr Arg Leu Thr Ala Ala
        275                 280                 285
Thr Phe Phe`Ile Lys Met Asn Gln Lys Thr Val Pro Glu Phe Lys Asn
        290                 295                 300
Lys His Leu Arg Leu Ala Ile Ser Gln Ala Ile Asn Lys Lys Gly Tyr
305                 310                 315                 320
Val Asn Ser Val Leu Asn Asp Gly Ser Leu Pro Ser Asn Asn Phe Thr
                325                 330                 335
Gly Val Gly Thr Ala Asp Thr Pro Asp Gly Lys Asp Phe Ala Arg Thr
                340                 345                 350
Ile Lys Ser Pro Leu Lys Phe Asn Pro Asp Leu Ala Lys Lys Asn Trp
                355                 360                 365
Arg Glu Ala Gln Lys Glu Leu Gly Lys Asn Lys Phe Thr Phe Thr Met
        370                 375                 380
Asn Thr Gln Asp Thr Pro Ala Ser Lys Ile Ala Ala Glu Tyr Ile Lys
385                 390                 395                 400
Ser Gln Ile Glu Ser His Leu Pro Gly Val Thr Leu Lys Ile Lys Gln
                405                 410                 415
Met Pro Phe Lys Gln Lys Thr Thr Leu Glu Leu Ala Asn Asn Tyr Glu
                420                 425                 430
Ala Ser Tyr Ser Gly Trp Ser Pro Asp Tyr Pro Asp Pro Thr Ala Phe
                435                 440                 445
Leu Gln Thr Met Thr Lys Asn Asn Ala Gln Asn Asn Thr Asp Trp Ser
        450                 455                 460
Asn Lys Glu Tyr Asp Gln Leu Leu Lys Asp Ala Asn Ser Lys Phe Leu
465                 470                 475                 480
Arg Lys Pro Gly Glu Arg Asn Thr Ser Leu Gln Lys Ala Glu Tyr Ile
                485                 490                 495
Leu Leu His Glu Ala Pro Val Ala Pro Val Tyr Gln Lys Gly Glu Ala
                500                 505                 510
His Leu Thr Asn Pro Gln Val Lys Gly Leu Gln Tyr His Lys Val Gly
        515                 520                 525
Pro Glu Thr Thr Leu Lys His Val Tyr Ile Asp Lys Ser Ile Asn Arg
        530                 535                 540
Glu Thr Gly Lys
545


<210> 5812
<211> 67
<212> PRT
<213> S.epidermidis

<400> 5812
Phe Lys Gly Gly Leu Val Met Thr Val Ala Glu Val Gly Asn Ile Val
1               5               10                  15
Glu Phe Tyr Asp Gly Leu Arg Gly Arg Val Glu Lys Ile Asn Asp Asn
            20              25              30
Ser Val Ile Val Asp Leu Thr Ile Met Asp Asn Phe Asn Glu Leu Asp
        35              40              45
Leu Pro Glu Lys Thr Val Ile Asn His Lys Arg Tyr Lys Ile Val Asp
    50              55              60
Gln Glu Gly
65


<210> 5813
<211> 139
```

<212> PRT
<213> S.epidermidis

<400> 5813
Lys Asp Gly Gly Thr Asn Met Leu His Val His Ile Leu Ser Trp Val
1   5   10   15
Leu Ala Ile Ile Leu Phe Ile Ala Thr Tyr Leu Asn Tyr Ser Gln Thr
            20   25   30
Gln Gly Ala Ser Pro Tyr Tyr Lys Pro Leu His Met Ala Leu Arg Leu
        35   40   45
Phe Met Leu Leu Thr Leu Ile Ser Gly Phe Trp Glu Leu Ile Glu Glu
    50   55   60
Phe Met Ala Ala Ser Asn Gly Glu Gly Gly Asn His Met Leu Leu Thr
65   70   75   80
Leu Lys Met Leu Cys Gly Leu Ala Val Ile Ala Phe Met Glu Ile Ser
            85   90   95
Ile Ala Lys Arg Lys Lys Gln Gln Thr Ser His Lys Phe Phe Trp Ile
            100   105   110
Thr Ile Ile Leu Ile Ile Ile Thr Met Ala Ile Gly Val Ile Leu Pro
        115   120   125
Trp Gly Pro Ile Ser Lys Ile Phe Gly Ile Ser
    130   135

<210> 5814
<211> 55
<212> PRT
<213> S.epidermidis

<400> 5814
Ile Ile Ile Leu Lys Phe Ile Asn Leu Pro Arg Thr Ile Tyr Asn Gly
1   5   10   15
Val Cys Val Thr Phe Ser Leu Ile Asn Leu Lys Lys His Phe Leu Ala
            20   25   30
Gln Ile His Glu Ser Lys Lys Cys Phe Phe Tyr Pro Trp Asn Ile Asn
        35   40   45
Asn Lys Met Ile Ala Thr Ile
    50   55

<210> 5815
<211> 1162
<212> PRT
<213> S.epidermidis

<400> 5815
Gly Asn Val Met Glu Phe Asn Thr Tyr Ile Gly Arg Ala Gly Thr Gly
1   5   10   15
Lys Ser Thr Ala Met Leu Asn Gln Ile Lys Asn Lys Met Lys Gln Asp
            20   25   30
Pro Leu Gly Asp Pro Ile Val Leu Ile Ala Pro Thr Gln Ser Thr Phe
        35   40   45
Gln Leu Glu Gln Ala Phe Val Asn Asp Ser Glu Leu His Gly Ser Leu
    50   55   60
Arg Thr Glu Val Leu His Phe Glu Arg Leu Ser His Arg Val Phe Gln
65   70   75   80
Glu Val Gly Gly Leu Thr Glu Gln Arg Leu Ser Lys Asp Ala Leu Glu
            85   90   95

```
Met Met Ile Phe His Ile Val Gln Gln His Glu Ser Asp Leu Lys Leu
            100                 105                 110
Tyr Gly Ser Gln Ala Gln Tyr Tyr Gly Leu Ser Glu Lys Leu Ala Glu
            115                 120                 125
Gln Ile Gln Asp Phe Lys Lys Tyr Asn Val Thr Pro Glu His Leu Asn
    130                 135                 140
Gln Leu Ile Glu Asn His Ser Ile Gln Thr Arg Thr Lys His Lys Leu
145                 150                 155                 160
Glu Asp Ile Ser Leu Ile Tyr Lys Gln Leu Glu Ser Arg Met Asn Gly
                165                 170                 175
Glu Phe Ile Thr Thr Glu Asp Ser Leu Gln Gln Phe Ile Glu Ile Leu
            180                 185                 190
Ser Gln Ser Gln Trp Ile Lys Lys Ala Glu Val Phe Ile Asp Gly Phe
            195                 200                 205
His Asn Phe Ser Thr Leu Glu Tyr Arg Ile Ile Glu Ala Leu Val Gln
    210                 215                 220
His Ala Lys Gln Val Thr Val Leu Leu Thr Thr Asp Gly Ser His His
225                 230                 235                 240
Pro Phe Ser Leu Phe Arg Lys Pro Ser Glu Val Leu Ser His Leu Glu
                245                 250                 255
Asp Ile Ala Asn Arg Leu Asn Ile Asn Leu Asn Lys Thr Tyr Phe Asn
                260                 265                 270
Thr Phe Tyr Arg Tyr Asn Asn Asp Asp Leu Lys Asn Leu Glu Asn Gly
            275                 280                 285
Phe Asp Ala Leu Gln Phe Thr Pro Lys His His Gln Asn His Val Lys
    290                 295                 300
Ile Phe Glu Ser Ser Ser Met Arg Glu Glu Ile Asn Glu Val Ala Arg
305                 310                 315                 320
Arg Ile Leu Lys Asp Val Arg Glu Ala Asp Tyr Lys Phe Arg Asp Ile
                325                 330                 335
Ala Ile Leu Tyr Arg Asp Glu Ser Tyr Ala Tyr Leu Phe Glu Ser Ile
                340                 345                 350
Leu Pro Ser Tyr Asp Ile Pro Phe Asn Ile Asp Thr Lys Lys Ser Met
            355                 360                 365
Thr His His Pro Ile Met Glu Met Leu Arg Ser Leu Leu Glu Val Ile
    370                 375                 380
Arg Ser Asn Trp His Ile Asn Ala Met Leu Arg Leu Phe Lys Thr Asn
385                 390                 395                 400
Val Leu Thr Ser Gln Phe Lys Arg Ser Ser Tyr Leu Ile Asp Leu Leu
            405                 410                 415
Glu Asn Phe Val Leu Glu Arg Gly Ile Tyr Gly Lys Arg Trp Leu Asp
            420                 425                 430
Glu Asp Ile Phe Ser Ile Asp Gln Phe Ser Arg Met Gly Arg Lys Ser
            435                 440                 445
His Gln Leu Thr Glu Gly His Gln Ala Leu Tyr Lys Glu Val Ile Lys
    450                 455                 460
Leu Lys Lys Asn Val Ile Asn Lys Val Leu Tyr Phe Glu Gln Ala Met
465                 470                 475                 480
Asn Glu Ala His Thr Val Lys Asp Tyr Ala Thr Ser Phe Tyr Glu Ser
                485                 490                 495
Leu Glu Tyr Phe Glu Leu Pro Ser Gln Leu Met Thr Gln Arg Asp Glu
            500                 505                 510
Leu Glu Leu Ala Gly Leu Thr Glu Lys Ala Glu Glu Ile Asp Gln Val
            515                 520                 525
Trp Asn Gly Leu Ile Gln Ile Leu Asp Asp Leu Val Thr Val Phe Asp
    530                 535                 540
```

Asp Gln Glu Met Thr Leu Gln Gln Phe Leu Asp Val Phe Asp Ile Gly
545   550   555   560
Leu Glu Gln Leu Glu Phe Val Met Ile Pro Gln Thr Leu Asp Gln Val
                565   570   575
Ser Ile Gly Thr Met Asp Leu Ala Lys Val Asp Asn Lys Lys His Ile
                580   585   590
Tyr Met Val Gly Met Asn Asp Gly Ile Leu Pro Gln Thr Val Ser Ser
                595   600   605
Ser Ser Leu Ile Thr Asp Glu Glu Lys Lys Tyr Val Glu Asp Asn Ala
        610   615   620
His Val Glu Leu Ser Pro Thr Ser Asp Ile Leu Gln Met Asp Glu Ala
625   630   635   640
Phe Val Cys Tyr Ile Ala Met Thr Arg Ser Gln Gln Ser Val Thr Phe
                645   650   655
Ser Tyr Ser Leu Met Gly Asn Ser Gly Asp Glu Lys Glu Ile Ser Pro
                660   665   670
Phe Leu Thr Gln Ile Lys Glu Leu Phe Tyr Asp Leu Glu Ile Ile Asn
                675   680   685
Leu Gln Asp Leu His Lys Ala Gln Pro Leu Leu Met Met Gln His Ser
        690   695   700
His Gln Thr Lys Ile Gln Leu Phe Glu Tyr Leu Arg Gly Trp Leu Asp
705   710   715   720
His Glu Asp Ile Asp Tyr Arg Trp Leu Asp Ala Tyr Leu Ala Ile Arg
                725   730   735
Asp Asp Asp Gln Leu Asn Gln Gly Leu Asp Tyr Leu Thr Thr Ser Leu
                740   745   750
Thr Tyr Asp Asn Glu Thr Val Gln Leu Asn Glu Ile Leu Ser Gln Gln
        755   760   765
Leu Tyr Gly Lys Thr Ile Asn Ala Ser Val Ser Arg Phe Glu Gly Tyr
        770   775   780
Gln Gln Cys Pro Phe Lys His Tyr Ala Ser His Gly Leu Arg Leu Asn
785   790   795   800
Glu Arg Thr Lys Tyr Glu Leu Gln Asn Phe Asp Leu Gly Asp Ile Phe
                805   810   815
His Ser Val Leu Lys Tyr Ile Ser Asp Arg Ile Tyr Gly Asp Phe Lys
                820   825   830
Asn Leu Asp Thr Lys Asn Ile Gln Ser Leu Thr Lys Glu Ala Leu Glu
        835   840   845
Leu Ile Leu Pro Lys Val Gln Phe Asn Leu Leu Asn Ser Ser Ala Tyr
        850   855   860
Tyr Lys Tyr Leu Ser Lys Lys Ile Gly Ser Ile Val Glu Thr Thr Leu
865   870   875   880
Lys Ala Leu Lys Tyr Gln Gly Glu Tyr Ser Lys Phe Val Pro Gln Arg
                885   890   895
Phe Glu Thr Gly Phe Arg Lys Ser Pro Lys Asn Lys Gly Glu Leu Val
                900   905   910
Ala Gln Pro Leu Ile Thr Asn Gln Gly Ile Pro Ile Asn Ile Arg Gly
        915   920   925
Gln Ile Asp Arg Ile Asp Thr Tyr Thr Lys Gly Asp His Ser Tyr Val
        930   935   940
Asn Ile Ile Asp Tyr Lys Ser Ser Glu Ser Ser Ala Thr Leu Asp Leu
945   950   955   960
Thr Lys Val Tyr Tyr Gly Leu Gln Met Gln Met Met Thr Tyr Met Asp
                965   970   975
Ile Val Leu Gln Asn Lys Glu Arg Leu Gly Leu Thr Asp Ile Val Lys
        980   985   990

```
Pro Gly Gly Leu Leu Tyr Phe His Val His Glu Pro Arg Ile Lys Phe
        995                     1000                    1005
Lys Ser Trp Ala Asp Ile Asp Glu Asp Gln Phe Gln Lys Asp Tyr Ile
    1010                    1015                    1020
Lys Asn Phe Lys Met Ser Gly Leu Leu Asn Arg Asp Gln Glu Val Leu
1025                    1030                    1035                    1040
Asp Ala Leu Asp Ile Arg Leu Glu Pro Lys Tyr Asn Ser Asp Ile Val
                1045                    1050                    1055
Pro Ile Ala Leu Thr Ala Lys Gly Ala Ile Asn Gln Arg Ser Ser Lys
            1060                    1065                    1070
Val Ala Asp Glu Asn Ile Ile Tyr Gln Leu Ile Glu His Asn Lys Lys
            1075                    1080                    1085
Asn Phe Ile Glu Thr Ala Ser His Ile Met Asp Gly His Thr Glu Val
    1090                    1095                    1100
Ala Pro Leu Lys Tyr Lys Gln Val Leu Pro Cys Gln Phe Cys Asn Tyr
1105                    1110                    1115                    1120
Lys Ser Val Cys His Val Asp Gly Leu Ile Asp Ser Lys Arg Tyr Arg
                1125        ·           1130                    1135
Thr Val Asp Glu Ser Ile Lys Pro Leu Asp Leu Ile Gln Gln Leu Arg
                1140                    1145                    1150
Asn Glu Gly Gly Glu Arg His Asp Ser Asn
                1155                    1160


<210> 5816
<211> 260
<212> PRT
<213> S.epidermidis

<400> 5816
Gly Val Thr Ile Met Leu Asn Leu Glu Asn Lys Thr Tyr Val Ile Met
1                   5                   10                      15
Gly Ile Ala Asn Lys Arg Ser Ile Ala Phe Gly Val Ala Lys Val Leu
            20                  25                  30
Asp Arg Leu Gly Ala Lys Leu Val Phe Thr Tyr Arg Lys Glu Arg Ser
        35                  40                  45
Arg Lys Glu Leu Glu Lys Leu Leu Glu Gln Leu Asn Gln Ser Glu His
    50                  55                  60
His Leu Tyr Glu Ile Asp Val Gln Asn Asp Glu Asp Ile Ile Asn Gly
65                  70                  75                      80
Phe Ser Gln Ile Gly Lys Asp Val Gly Gln Ile Asp Gly Val Tyr His
            85                  90                  95
Ser Ile Ala Phe Ala Asn Met Glu Asp Leu Arg Gly Arg Phe Ser Glu
            100                 105                 110
Thr Ser Arg Glu Gly Phe Leu Leu Ala Gln Glu Ile Ser Ser Tyr Ser
        115                 120                 125
Leu Thr Leu Val Ala His Glu Ala Lys Lys Leu Met Pro Glu Gly Gly
    130                 135                 140
Ser Ile Val Ala Thr Thr Tyr Ile Gly Gly Glu Ala Ala Val Gln Asn
145                 150                 155                     160
Tyr Asn Val Met Gly Val Ala Lys Ala Ser Leu Glu Ala Asn Val Lys
            165                 170                 175
Tyr Leu Ala Leu Asp Leu Gly Glu Asp Asn Ile Arg Val Asn Ala Ile
            180                 185                 190
Ser Ala Gly Pro Ile Arg Thr Leu Ser Ala Lys Gly Val Gly Gly Phe
        195                 200                 205
Asn Thr Ile Leu Lys Glu Ile Glu Ala Arg Ala Pro Leu Lys Arg Asn
```

```
            210                      215                      220
Val Asp Gln Glu Glu Val Gly Lys Thr Ala Ala Tyr Leu Leu Ser Asp
225                      230                      235                      240
Leu Ser Ser Gly Val Thr Gly Glu Asn Ile His Val Asp Gly Gly Phe
                    245                      250                      255
His Ala Ile Lys
                260
```

<210> 5817
<211> 148
<212> PRT
<213> S.epidermidis

<400> 5817
```
Leu Gln Tyr Ile Asp Gly Leu Ile Asp Lys Gln Leu Ile Asp Glu Asp
1                   5                       10                      15
Ala Lys Glu Asp Val Arg Arg Asp Glu Ile Met His Phe Ile Asp Gly
                20                      25                      30
Pro Leu Tyr Met Glu Ile Ala Gln Ala Asp Asn Val Tyr Thr Glu Leu
            35                      40                      45
Pro Phe Val Val Asn Gln Ile Lys Val Asp Gly Leu Thr Ser Glu Asp
        50                      55                      60
Glu Asp Val Ser Ile Ile Gln Gly Met Ile Asp Leu Ile Tyr Glu Ser
65                      70                      75                      80
Asp Gly Gln Phe Tyr Phe Val Asp Tyr Lys Thr Asp Ala Phe Asn Arg
                85                      90                      95
Arg Lys Gly Met Ser Asp Glu Glu Ile Gly Asn Gln Leu Lys Glu Lys
            100                     105                     110
Tyr Gln Ile Gln Met Thr Tyr Tyr Arg Asn Thr Leu Glu Thr Ile Leu
            115                     120                     125
Lys Arg Pro Val Lys Gly Tyr Leu Tyr Phe Phe Lys Phe Gly Thr Leu
            130                     135                     140
Glu Ile Asp Asp
145
```

<210> 5818
<211> 617
<212> PRT
<213> S.epidermidis

<400> 5818
```
Gly Gly His Met Glu Phe Leu Ser Leu Val Ile Val Val Ala Ala
1                   5                       10                      15
Phe Met Thr Pro Ile Ile Val His Arg Phe Asn Ile Asn Phe Leu Pro
                20                      25                      30
Val Val Val Ala Glu Ile Leu Met Gly Ile Val Ile Gly His Ser Phe
            35                      40                      45
Leu Asn Leu Val Glu Arg Asp Ala Phe Leu Asn Ile Leu Ser Thr Leu
        50                      55                      60
Gly Phe Ile Phe Leu Met Phe Leu Ser Gly Leu Glu Ile Asp Phe Asn
65                      70                      75                      80
Ala Phe Lys Lys Asp Ser Arg Pro Arg Gln Gly Glu Asp Lys His Glu
                85                      90                      95
Lys Asp Val Pro Gly His Leu Lys Leu Ala Leu Thr Val Phe Ala Phe
            100                     105                     110
Ile Met Met Ile Ser Val Val Leu Ala Phe Ala Phe Lys Trp Leu Gly
```

```
            115                    120                    125
Leu Val Asn Asp Val Leu Leu Met Val Ile Ile Ile Ser Thr Ile Ser
    130                    135                    140
Leu Gly Val Val Val Pro Thr Leu Lys Glu Met Asn Ile Met Arg Thr
145                    150                    155                    160
Thr Ile Gly Gln Phe Ile Leu Leu Val Ala Val Leu Ala Asp Leu Phe
            165                    170                    175
Thr Met Ile Leu Leu Thr Val Tyr Gly Ala Ile Tyr Gly Glu Gly Gly
            180                    185                    190
Ser Thr Ile Trp Leu Thr Gly Ile Leu Val Val Phe Thr Val Val Phe
            195                    200                    205
Tyr Val Ile Gly Val Leu Phe Lys Arg Met Ser Phe Leu Gln Lys Leu
    210                    215                    220
Met Asp Gly Thr Thr Gln Ile Gly Ile Arg Ala Val Phe Ala Leu Ile
225                    230                    235                    240
Ile Leu Leu Val Ala Leu Ala Glu Gly Val Gly Ala Glu Tyr Ile Leu
            245                    250                    255
Gly Ala Phe Leu Ala Gly Val Val Val Ser Leu Leu Lys Pro Asn Glu
            260                    265                    270
Glu Met Val Glu Lys Leu Asp Ser Phe Gly Tyr Gly Phe Phe Ile Pro
            275                    280                    285
Ile Phe Phe Ile Met Val Gly Val Asp Leu Asp Ile Pro Ser Leu Ile
            290                    295                    300
Lys Glu Pro Ser Leu Leu Leu Ile Ile Pro Val Leu Ile Phe Ser Phe
305                    310                    315                    320
Ile Ile Ser Lys Leu Ile Pro Val Phe Tyr Ile Arg Arg Trp Phe Asp
            325                    330                    335
Thr Lys Thr Thr Ile Ala Ser Ala Phe Leu Leu Thr Ser Thr Leu Ser
            340                    345                    350
Leu Val Ile Ala Ala Ala Lys Ile Ala Glu Lys Leu Lys Ala Ile Ser
            355                    360                    365
Pro Glu Thr Ser Gly Ile Leu Ile Leu Ser Ala Val Ile Thr Cys Val
    370                    375                    380
Phe Val Pro Val Ile Phe Lys Lys Met Phe Pro Ile Pro Asn Glu Val
385                    390                    395                    400
Gly Arg Arg Ile Glu Val Ser Met Ile Gly Lys Asn Gln Leu Thr Ile
            405                    410                    415
Pro Ile Ala Gln Asn Leu Thr Ser Gln Leu Tyr Asp Ile Ser Leu Tyr
            420                    425                    430
Tyr Arg Lys Asp Leu Ser Asp Ser Arg Lys Leu Ser Asp Asp Ile Thr
            435                    440                    445
Met Ile Glu Ile Ala Asp Tyr Glu Glu Asp Leu Leu Glu Arg Leu Gly
    450                    455                    460
Leu Phe Glu Arg Asp Ile Val Val Cys Ser Thr Asn Asp Asp His Ile
465                    470                    475                    480
Asn Lys Ser Val Ala Leu Met Ala Lys Lys His Gly Val Lys Arg Val
            485                    490                    495
Ile Cys Arg Leu Glu Ser Thr Asn Glu Asp Pro Thr Leu Lys His Gln
            500                    505                    510
Gly Ile Glu Val Phe Ser Asn Tyr Leu Ser Asn Lys Ile Leu Leu Lys
            515                    520                    525
Ser Leu Ile Glu Thr Pro Asn Met Leu Asn Leu Leu Ser Asn Val Glu
    530                    535                    540
Thr Ser Leu Tyr Glu Ile Gln Met Leu Asn Tyr Gln Tyr Glu Asn Ile
545                    550                    555                    560
Gln Leu Arg Asn Phe Pro Phe Gly Gly Asp Ile Ile Phe Val Arg Ile
```

```
                    565                      570                      575
Ile Arg Asp Asn Asp Ser Ile Val Pro His Gly Asp Thr Gln Leu Arg
                580                      585                      590
Tyr Lys Asp Arg Leu Ile Val Thr Gly Thr Lys Glu Tyr Val Asp Glu
                595                      600                      605
Leu Lys Gln Glu Leu Glu Phe Tyr Tyr
                610                      615
```

<210> 5819
<211> 92
<212> PRT
<213> S.epidermidis

<400> 5819
```
Lys Gln His Ile Lys Asn Leu Val Val Asp Leu Leu Arg Ile Lys Ser
1                   5                       10                      15
Leu Gln Phe His Gly Met Met Ile Asn Val Tyr His Tyr His Ser Asn
                20                      25                      30
Asp Leu Ile Met Leu Ala Ile Pro Glu Leu Phe Trp Ser Ile Glu Leu
            35                      40                      45
Ser Lys Glu Leu Asp Ala Asn Gln Leu Tyr Glu Glu Leu Val Met Gln
        50                      55                      60
Leu Phe Asn Leu Leu Thr Glu Val Glu Ala Asp Thr Leu Ala Ser Asn
65                      70                      75                      80
Ile Thr Asp Leu Ile Arg Asn Glu Ser Lys Gly Glu
                85                      90
```

<210> 5820
<211> 332
<212> PRT
<213> S.epidermidis

<400> 5820
```
Ala Ser Asn Met Glu Thr Leu Phe Ser Gly Ile Gln Pro Ser Gly Ile
1                   5                       10                      15
Pro Thr Ile Gly Asn Tyr Ile Gly Ala Leu Lys Gln Phe Val Asp Val
                20                      25                      30
Gln Asp Asp Tyr Glu Cys Phe Phe Cys Ile Val Asp Gln His Ala Ile
            35                      40                      45
Thr Val Pro Gln Asp Arg Leu Lys Leu Arg Lys Gln Ile Arg Gln Leu
        50                      55                      60
Ala Ala Ile Tyr Leu Ala Thr Gly Ile Asp Pro Asp Lys Ser Thr Leu
65                      70                      75                      80
Phe Ile Gln Ser Glu Val Pro Ala His Val Gln Ala Gly Trp Met Leu
                85                      90                      95
Thr Thr Ile Ala Ser Ile Gly Glu Leu Glu Arg Met Thr Gln Phe Lys
                100                     105                     110
Asp Lys Ala Gln Lys Arg Ala Asp Gly Val Pro Ala Gly Leu Leu Thr
            115                     120                     125
Tyr Pro Pro Leu Met Ala Ala Asp Ile Val Ile Tyr Asn Thr Asn Ile
        130                     135                     140
Val Pro Val Gly Asp Asp Gln Lys Gln His Met Glu Leu Thr Arg Asn
145                     150                     155                     160
Leu Val Asp Arg Phe Asn Ser Arg Tyr Asn Asp Val Leu Val Lys Pro
                165                     170                     175
Glu Val Arg Met Pro Lys Val Gly Gly Arg Val Met Ser Leu Gln Asp
```

```
                  180                   185                   190
Pro Thr Lys Lys Met Ser Lys Ser Asp Asp Asn Gln Lys Asn Phe Ile
        195                   200                   205
Ser Leu Leu Asp Glu Pro His Val Ala Ala Lys Lys Ile Lys Ser Ala
        210                   215                   220
Val Thr Asp Ser Asp Gly Ile Ile Lys Phe Asp Arg Glu Asn Lys Pro
225                   230                   235                   240
Gly Ile Ser Asn Leu Leu Ser Ile Tyr Ser Gly Leu Thr Asn Glu Ser
                  245                   250                   255
Ile Lys Asn Ile Glu Ser Lys Tyr Glu Gly Glu Gly Tyr Gly Lys Phe
                  260                   265                   270
Lys Gly Asp Leu Ser Glu Ile Val Lys Asp Phe Leu Ile Asn Phe Gln
        275                   280                   285
Glu Lys Tyr Ala Ser Phe Tyr Asn Ser Asp Asp Leu Asp Asp Ile Leu
        290                   295                   300
Asp Lys Gly Lys Glu Lys Ala Gln Lys Ala Ser Phe Lys Thr Leu Lys
305                   310                   315                   320
Lys Met Glu Lys Ala Met Gly Leu Gly Arg Lys Arg
                  325                   330
```

<210> 5821
<211> 285
<212> PRT
<213> S.epidermidis

<400> 5821
```
Thr Met Ile Leu Thr Tyr Gln Ile Val Gln Ser Glu Pro Val Lys Thr
1               5                   10                  15
Phe Leu Lys Asn Gln Asp Tyr Ser Lys Arg Thr Leu Ser Ala Ile Lys
        20                  25                  30
Leu Asn Gly Ala Leu Leu Leu Asn Gly Ser Pro Val Thr Val Arg His
        35                  40                  45
Val Met Asn Lys Gly Asp Arg Leu Glu Val His Phe Pro Cys Glu Thr
        50                  55                  60
Pro Ser Glu Asn Leu Ile Pro Tyr Asp Lys Glu Leu Glu Val Ile Tyr
65                  70                  75                  80
Glu Asp Ala Tyr Leu Ile Ile Val Asn Lys Pro Gln Met Gln Asn Cys
                85                  90                  95
Ala Pro Ser Arg Glu His Pro His Gly Ser Leu Val Glu Gln Val Leu
        100                 105                 110
Ala Tyr Tyr Thr Lys Lys Gly Glu Lys Ile Asn Pro His Ile Val Thr
        115                 120                 125
Arg Leu Asp Arg Asn Thr Ser Gly Leu Val Val Phe Ala Lys Phe Gly
        130                 135                 140
His Val His His Leu Phe Ser Lys Val Lys Phe Lys Lys Glu Tyr Val
145                 150                 155                 160
Ala Leu Ala Tyr Gly His Thr Gln Ser Ser Gly Val Ile Glu Ala Pro
                165                 170                 175
Ile Ala Arg Arg Ser Asp Ser Ile Ile Lys Arg Glu Val Asn Asp Lys
        180                 185                 190
Gly Lys Tyr Ala Lys Thr Val Tyr Gln Arg Leu Met Gln Asn Glu Thr
        195                 200                 205
Ala Ser Leu Cys Lys Val Lys Leu Leu Thr Gly Arg Thr His Gln Ile
        210                 215                 220
Arg Val His Phe Glu Tyr Ile Gly His Pro Leu Ile Gly Asp Asp Leu
225                 230                 235                 240
```

Tyr Gly Gly Asn His Pro Cys Val His Gly Gln Ala Leu His Cys Cys
           245   250   255
Ser Val Glu Phe Ile His Pro Ile Tyr Arg Ser His Tyr Leu Ile Asn
           260   265   270
Val Asp Tyr Lys Gln Leu Ile Lys Leu Phe Asn Met Val
           275   280   285

<210> 5822
<211> 404
<212> PRT
<213> S.epidermidis

<400> 5822
Gly Val Asn Met Lys Asp Lys Ile Val Leu Ala Tyr Ser Gly Gly Leu
1   5   10   15
Asp Thr Ser Val Ala Val Gln Trp Leu Ile Asp Lys Gly Tyr Asp Val
           20   25   30
Val Ala Cys Cys Leu Asp Val Gly Glu Gly Lys Asp Leu Asp Val Val
           35   40   45
Tyr Gln Lys Ala Leu Asp Met Gly Ala Val Glu Cys His Ile Ile Asp
       50   55   60
Ala Thr Lys Glu Phe Ser Asp Asp Tyr Val Ser Tyr Ala Ile Lys Gly
65   70   75   80
Asn Leu Met Tyr Glu Asn Ala Tyr Pro Leu Val Ser Ala Leu Ser Arg
           85   90   95
Pro Leu Ile Ala Lys Lys Leu Val Glu Ile Ala Glu Lys Thr Asn Ser
           100   105   110
Ile Gly Ile Ala His Gly Cys Thr Gly Lys Gly Asn Asp Gln Val Arg
           115   120   125
Phe Glu Val Ala Ile Lys Ala Leu Asn Pro Lys Leu Lys Ala Phe Ala
           130   135   140
Pro Val Arg Glu Trp Ala Trp Ser Arg Glu Glu Glu Ile Asp Tyr Ala
145   150   155   160
Ile Lys His Asn Ile Pro Val Ser Ile Asn Tyr Asp Ser Pro Tyr Ser
           165   170   175
Ile Asp Gln Asn Leu Trp Gly Arg Ala Asn Glu Cys Gly Ile Leu Glu
           180   185   190
Asp Pro Tyr Ala Ala Pro Pro Glu Asp Ala Phe Asp Leu Thr Thr Pro
           195   200   205
Leu Glu Glu Thr Pro Asp Asn Ala Asp Glu Ile Ile Leu Thr Phe Lys
           210   215   220
Gln Gly Ile Pro Val Gln Val Asp Gly Lys Asp Tyr Gln Leu Asp Asp
225   230   235   240
Leu Ile Leu Tyr Leu Asn Gln Leu Ala Gly Lys His Gly Ile Gly Arg
           245   250   255
Ile Asp His Val Glu Asn Arg Met Val Gly Ile Lys Ser Arg Glu Ile
           260   265   270
Tyr Glu Thr Pro Gly Ala Glu Val Ile Leu Lys Ala His Lys Ala Leu
           275   280   285
Glu Thr Ile Thr Leu Thr Lys Asp Val Ala His Phe Lys Pro Val Ile
           290   295   300
Glu Lys Gln Phe Ser Glu Gln Ile Tyr Asn Gly Leu Trp Phe Ser Pro
305   310   315   320
Leu Thr Asp Ser Leu Lys Leu Phe Ile Asp Ser Thr Gln Gln Tyr Val
           325   330   335
Glu Gly Asp Val Arg Ile Lys Leu Phe Lys Gly Asn Ala Ile Val Asn

```
                340                      345                      350
Gly Arg Gln Ser Pro Tyr Thr Leu Tyr Asp Glu Lys Leu Ala Thr Tyr
            355                      360                      365
Thr Lys Glu Asp Ala Phe Asn Gln Glu Ser Ala Val Gly Phe Ile Asp
        370                      375                      380
Ile Tyr Gly Leu Pro Thr Gln Val Asn Ala Leu Leu His Gly Gly Tyr
385                      390                      395                      400
Ser Asn Glu Gln
```

<210> 5823
<211> 263
<212> PRT
<213> S.epidermidis

<400> 5823
```
Tyr Asn Ser Ile Asn Ile Thr Arg Glu His Arg Phe Met Ser Glu Phe
1                   5                   10                  15
Lys Val Gly Lys Ile Asn Lys Lys Ile Ile His Ser Asp Ile Leu Asn
            20                  25                  30
Arg Asp Val Thr Leu Ser Val Tyr Leu Pro Glu Asp Tyr Thr Asn Leu
        35                  40                  45
Phe Lys Tyr Gln Leu Ile Phe Cys Phe Asp Gly Leu Asp Phe Phe Arg
    50                  55                  60
Phe Gly Arg Ile Gln Arg Ile Tyr Glu Gln Leu Arg Glu Glu Gln Ser
65                  70                  75                  80
Ile Gln Arg Ala Ile Ile Val Gly Phe His Tyr Glu Asp Val Glu Lys
                85                  90                  95
Arg Arg Glu Glu Phe His Pro Ser Gly Ser Arg Ser Asn Leu Thr Ile
            100                 105                 110
Lys Ala Met Gly Lys Glu Ile Leu Pro Tyr Ile Asp Ala Thr Phe Pro
            115                 120                 125
Thr Tyr Lys Val Gly Asn Thr Arg Leu Leu Ile Gly Asp Ser Leu Ala
        130                 135                 140
Gly Ser Ile Ala Leu Met Thr Ala Met Thr Tyr Pro Thr Ile Phe Ser
145                 150                 155                 160
Arg Val Ala Leu Leu Ser Pro Met Tyr Asn Glu Asn Ile Lys Lys Lys
                165                 170                 175
Ile Asp Thr Cys Met Asn Lys Gly Gln Leu Thr Ile Trp His Ala Ile
            180                 185                 190
Gly Leu Glu Glu Ala Asp Phe Ile Leu Pro Thr Asn Gly Lys Arg Ala
        195                 200                 205
Asn Phe Leu Thr Pro Asn Arg Glu Leu Asn Gln Leu Ile Lys Glu Asp
        210                 215                 220
Asn Ile Glu Tyr Phe Tyr Lys Glu Phe Asn Gly Gly His His Trp Lys
225                 230                 235                 240
Ser Trp Lys Pro Leu Leu Gly Asp Ile Leu Leu Gln Phe Leu Gly Asp
                245                 250                 255
Pro Ile Asn Gly Lys Tyr Val
            260
```

<210> 5824
<211> 201
<212> PRT
<213> S.epidermidis

<400> 5824
Lys Leu Ser Ile Asn Phe Ser Tyr Gln Tyr Leu Lys Gly Glu Ser Asn
1   5   10   15
Val Ile Arg Lys Ala Lys Thr Ser Asp Asn Arg Gln Ile Ala Glu Leu
            20   25   30
Cys Tyr Leu Ile Trp Arg Asp Met Glu Leu Asp Ile Thr Lys Glu Ile
        35   40   45
Thr Lys Asp Arg Ile Ile Glu Ala Ile Glu Leu Ser Ile Val Asn Val
    50   55   60
Arg Tyr Arg Ser Phe Tyr Glu His Ile Trp Val Tyr Glu Lys Asp Gly
65   70   75   80
Val Val Ala Gly Cys Val Ile Ala Tyr Pro Gly Lys Glu Glu Met Asp
                85   90   95
Phe Glu Gln Gln Trp Leu Lys Leu Pro Leu Glu Glu Asp Ile Leu Gln
            100   105   110
Leu Gly Thr Pro Leu Pro Glu Lys Glu Ser Tyr Asp Asp Glu Ile Tyr
        115   120   125
Ile Glu Ala Val Val Thr Thr Pro Lys Tyr Arg Gly Gln Gly Ile Ala
    130   135   140
Thr Gln Leu Leu Lys Tyr Val Ile Ser Thr His Ala His Glu Lys Trp
145   150   155   160
Gly Leu Asn Cys Asp Tyr Asp Asn Asn Lys Ala Arg His Leu Tyr His
                165   170   175
Lys Leu Gly Phe Lys Glu Asp Ala Thr Ile Arg Leu Tyr Gly His Gln
            180   185   190
Tyr Phe His Met Thr Leu Asn Asn Lys
        195   200

<210> 5825
<211> 56
<212> PRT
<213> S.epidermidis

<400> 5825
Ile Gln Ile Ile Ile Cys Gln Cys Asp Lys Phe Phe Lys Leu Phe Ile
1   5   10   15
His Val Val Leu Leu His Tyr Ile Lys Leu Ile Ile Leu Tyr Ala Leu
            20   25   30
Phe Ile Asn Tyr Thr Ile Gln Ile Tyr Thr Leu His Lys Phe Val Ala
        35   40   45
Ser Leu Pro Ile Phe Ile Leu His
    50   55

<210> 5826
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5826
Cys Phe Arg Ile Gln Gln Pro Phe Ala Asn Ile Leu Phe Tyr Leu Ser
1   5   10   15
Tyr Phe Ile Lys His Ile Phe His Leu Leu Asp His Leu Lys Ile Val
            20   25   30
Arg Glu Tyr Leu Leu Ala Met Val Ser Met Ile Ser Asn Asp Val His
        35   40   45
Arg

<210> 5827
<211> 194
<212> PRT
<213> S.epidermidis

<400> 5827
Gly Phe Leu Met Thr His Leu Pro Glu Thr Ile Tyr Val Ile Arg Lys
1   5   10   15
Gly Asp Met Val Ile Arg Pro Lys Tyr Asp Glu Tyr Gln Gln Thr Asn
            20   25   30
Gly Thr Glu Ile Ile Arg Phe Asp Gln Thr Arg Lys Glu Ser Pro Phe
            35   40   45
Lys Val Gln Arg Ile Ile Glu Arg Ser Cys Lys Phe Tyr Gly Asn Asn
        50   55   60
Tyr Ile Ser Lys Lys Ala Glu Thr Asn Arg Ile Thr Gly Ile Ser Ser
65   70   75   80
Lys Pro Pro Ile Leu Leu Thr Pro Leu Phe Pro Thr Tyr Phe Phe Pro
                85   90   95
Thr His Ser Asp Arg Gln Glu Glu Asn Ile Trp Ile Asn Met His Tyr
            100   105   110
Ile Glu Asn Val Lys Glu Leu Lys Asn Arg Lys Ser Lys Ile Ile Phe
            115   120   125
Ala Asn Gly Asp Ser Leu Thr Leu Asn Val Ser Phe His Ser Leu Trp
        130   135   140
His Gln Tyr Thr Asn Ala Ile Ile Tyr Tyr Tyr Met Val Asp Lys Gln
145   150   155   160
Ser Arg Met Lys Ser Asn Asn Pro Glu Gln Pro Ile Asp Tyr Asn Gln
                165   170   175
Ser Ser Leu Asn Ile Phe Glu Ala Leu Ser Arg Tyr Ser Leu Phe Glu
            180   185   190
Glu Asn

<210> 5828
<211> 57
<212> PRT
<213> S.epidermidis

<400> 5828
Phe Tyr Leu Ile Gln Leu Gln Leu Lys Pro Asn Leu Leu Tyr Phe His
1   5   10   15
Ile Thr Tyr Arg Arg Leu Pro Val Arg Leu His Ser His Pro Phe Phe
            20   25   30
Ser Leu Leu Ser Pro Pro Asn Phe Thr His Tyr Tyr Ile Val Ser Phe
        35   40   45
Leu Ile Phe Tyr Val Val Ile Asn Ala
    50   55

<210> 5829
<211> 767
<212> PRT
<213> S.epidermidis

<400> 5829

```
Tyr Ala Ile Ile Asn Val Ile Lys Phe Ile Lys Gly Gly Gln Leu Met
1               5                   10                  15
Asp Phe Ile Asn Ile Thr Gly Ala Ser Gln Asn Asn Leu Lys Asn Ile
            20                  25                  30
Asp Val Asn Ile Pro Lys His Leu Val Thr Val Phe Thr Gly Arg Ser
        35                  40                  45
Gly Ser Gly Lys Ser Ser Leu Val Phe Asn Thr Val Ala Ala Glu Ser
    50                  55                  60
Glu Gln Leu Leu Asn Glu Ser Tyr Ser Ser Tyr Ile Gln Phe His Leu
65                  70                  75                  80
Asn Gln Gln Pro Arg Pro Lys Val Lys Lys Ile Lys Asn Leu Pro Val
            85                  90                  95
Ala Met Thr Ile Asn Gln Lys Arg Phe Asn Gly Asn Ser Arg Ser Thr
            100                 105                 110
Val Gly Thr Val Ser Asp Ile Tyr Ala Ser Val Arg Leu Leu Trp Ser
        115                 120                 125
Arg Ile Gly Glu Pro Phe Val Gly Tyr Ser Asp Ala Tyr Ser Phe Asn
    130                 135                 140
Ser Pro Lys Gly Met Cys Lys Thr Cys Glu Gly Leu Gly Tyr Ile Glu
145                 150                 155                 160
Asp Ile Asn Leu Asp Glu Leu Leu Asp Trp Asp Lys Ser Leu Asn Glu
            165                 170                 175
Gly Ala Ile Asp Phe Pro Ser Phe Gly Pro Asp Lys Glu Arg Gly Lys
        180                 185                 190
Ala Tyr Arg Asp Ser Gly Leu Phe Asp Asn Asn Lys Lys Leu Lys Asp
        195                 200                 205
Tyr Thr Lys Asp Glu Leu Glu Leu Phe Leu Tyr Gln Glu Pro Met Thr
    210                 215                 220
Leu Lys Asn Pro Pro Lys Glu Trp Arg Lys Ser Ala Lys Tyr Val Gly
225                 230                 235                 240
Leu Ile Pro Arg Phe Ser Arg Ile Phe Leu Gly Asp Lys Glu Phe Asn
            245                 250                 255
Lys Lys Arg Tyr Ala Lys His Leu Lys Asn Val Val Asn Asn Lys Ile
            260                 265                 270
Cys Ser Thr Cys Lys Gly Gln Arg Leu Asn Ser Lys Ile Leu Ser Ser
    275                 280                 285
Lys Ile Met Ser Lys Asn Ile Ser Asp Phe Thr Gln Met Thr Ile Lys
    290                 295                 300
Glu Asn Leu Glu Phe Leu Asn Lys Leu Glu Asp Pro Thr Ala Lys Tyr
305                 310                 315                 320
Ile Ile Asp Pro Leu Lys Lys Gln Leu Glu Ala Leu Glu Tyr Ile Gly
            325                 330                 335
Leu Ser Tyr Leu Thr Leu Asn Arg Val Thr Thr Thr Leu Ser Gly Gly
        340                 345                 350
Glu Ala Gln Arg Leu Lys Leu Ile Arg His Leu Asn Ser Ser Leu Ser
        355                 360                 365
Asp Leu Val Tyr Ile Ile Asp Glu Pro Ser Val Gly Leu His Pro Glu
    370                 375                 380
Asp Ile Ala Lys Ile Asn Glu Ile Leu Lys Ser Leu Lys Glu Lys Gly
385                 390                 395                 400
Asn Thr Val Leu Ile Val Glu His Asp Pro Asp Val Ile Lys Glu Gly
            405                 410                 415
Asp Tyr Ile Ile Asp Met Gly Pro Gly Ser Gly Lys Asn Gly Gly Glu
        420                 425                 430
Ile Thr Phe Glu Gly Thr Tyr Asn Glu Leu Leu Ser Ser Asn Thr Ser
        435                 440                 445
```

```
Thr Gly Asn Ala Leu Arg Asn Lys His Asn Leu Lys Glu Asn Ile Arg
    450                     455                 460
Glu Ala Asn His Phe Tyr Asn Ile Gly Pro Val Thr Gln Asn Asn Leu
465                 470                 475                     480
Asn Asn Val Lys Thr Ser Ile Pro Lys His Val Leu Thr Val Leu Thr
            485                 490                     495
Gly Val Ala Gly Ser Gly Lys Ser Thr Leu Val Lys Ala Gly Phe Glu
                500                 505                 510
Asn Asn Asp His Thr Ile Phe Ile Asp Gln Lys Ala Val Gln Gly Ser
            515                 520                 525
Asn Arg Ser Asn Leu Leu Thr Tyr Leu Gly Val Phe Asp Ser Val Arg
    530                 535                 540
Ser Tyr Phe Ser Lys Glu Thr Gly Leu Asn Lys Ala Met Phe Ser Tyr
545                 550                 555                     560
Asn Ser Lys Gly Ala Cys Pro Asn Cys Gly Gly Lys Gly Tyr Ile Lys
                565                 570                 575
Thr Glu Leu Ala Phe Met Gly Asp Phe Ser Gln Thr Cys Glu Val Cys
                580                 585                 590
His Gly Lys Arg Tyr Lys Gln Glu Val Leu Asp Ala Thr Ile Asp Gly
            595                 600                 605
Tyr Ser Ile Ala Asp Val Leu Asn Leu Thr Val Asp Glu Gly Ile Ile
    610                 615                 620
Phe Phe Asp Lys Lys Asn Asp Ile Lys Ser Lys Leu Gln Ser Val Ser
625                 630                 635                     640
Lys Thr Gly Leu Asn Tyr Met Ser Leu Gly Gln Pro Leu Ser Thr Leu
                645                 650                 655
Ser Gly Gly Glu Ile Gln Arg Val Lys Leu Gly Gln His Leu Asp Glu
            660                 665                 670
Glu Ile Lys Asn Ser Ile Phe Ile Phe Asp Glu Pro Thr Thr Gly Leu
            675                 680                 685
His Glu Ser Asp Ile Pro Ile Leu Met Glu Cys Phe Asp Asp Leu Ile
    690                 695                 700
Asp Gln Asn Asn Thr Val Ile Leu Ile Glu His Asn Leu Ser Ile Met
705                 710                 715                     720
Cys Glu Ala Asp Trp Ile Ile Asp Val Gly Pro Gly Pro Gly Leu Asp
                725                 730                 735
Gly Gly Lys Val Gln Phe Ser Gly Thr Pro Lys Asn Phe Ile Asp Ser
            740                 745                 750
Ser Glu Thr Leu Thr Ser Lys His Leu Lys Arg Tyr Ile Lys Gln
    755                 760                 765
```

<210> 5830
<211> 82
<212> PRT
<213> S.epidermidis

<400> 5830
```
Phe Phe Pro Ile Ile Leu Thr Ser Met Arg Arg Pro Thr Ser Leu Gly
1               5                   10                  15
Ile Gly Asn Ile Phe Leu Asn Ile Thr Gly Thr Lys Thr His Val Ile
            20                  25                  30
Thr Ala Leu Arg Ile Lys Met Pro Glu Val Ser Gly Glu Ile Ala Phe
            35                  40                  45
Asn Phe Ser Ala Ile Leu Ala Ala Ala Ile Thr Ser Asp Lys Val Asp
    50                  55                  60
Val Ser Lys Lys Ala Asp Ala Met Val Val Leu Val Ser Asn Gln Arg
```

Leu Met

<210> 5831
<211> 106
<212> PRT
<213> S.epidermidis

<400> 5831
Leu Leu Ala Ile Glu Pro Pro Ile Ser Arg Lys Ser Ser Asp Ile Arg
1   5   10   15
Lys Glu Lys Val Gln Val Leu Arg Ser Leu Lys Cys Phe Asn Pro Asn
            20   25   30
Glu Ile Lys Glu Ser Phe Val Arg Gly Gln Tyr Asp Gly Gly Met Met
        35   40   45
Asn Asn Glu Phe Val Pro Ala Tyr Arg Asn Glu Pro Asn Val Asn Ser
        50   55   60
Gln Ser Asn Thr Glu Thr Phe Val Ala Gly Lys Ile Glu Ile Glu Asn
65   70   75   80
Ser Lys Trp Ala Ser Val Thr Phe Tyr Ile Arg Thr Glu Lys Arg Met
                85   90   95
Lys Lys Ile Tyr Pro Asn Arg Tyr Arg Val
            100   105

<210> 5832
<211> 353
<212> PRT
<213> S.epidermidis

<400> 5832
Lys Asp Val Phe Met Phe Lys Ser Lys Lys Ile Ile Ile Ser Thr Leu
1   5   10   15
Ser Thr Val Thr Leu Gly Leu Ala Ser Leu Ser Ser Pro Ser Ile Ala
            20   25   30
Glu Thr Ser Asn His Ser Pro Ala Pro Asn Gln Ser Glu Lys Ser Ile
        35   40   45
Gln Gln Gln Thr Asn Ile Pro Ser Asn Met Asn Gln Ser Ser Ala Lys
        50   55   60
Thr Phe Lys Arg Gln Ala Glu Ser Asp Ser Val Ser Gly Lys Thr Asn
65   70   75   80
Asp Thr His Asn His Trp Thr Lys Asn Leu Thr Gly Glu Lys Phe Thr
                85   90   95
Thr Ile Ala His Arg Gly Ala Ser Gly Tyr Ala Pro Glu His Thr Phe
            100   105   110
Glu Ala Tyr Asp Lys Ser His Asn Glu Leu Gly Ala Ser Tyr Ile Glu
            115   120   125
Ile Asp Leu Gln Arg Thr Lys Asp Gly His Leu Val Ala Met His Asp
        130   135   140
Glu Lys Val Asn Arg Thr Thr Asn Gly His Gly Arg Val Asp Gln Leu
145   150   155   160
Thr Leu Lys Glu Leu Lys Gln Leu Asp Ala Gly Ser Trp Phe Asn Arg
                165   170   175
Lys His Pro Glu Tyr Ala Lys Asn Lys Tyr Lys Asn Ala Lys Val Pro
            180   185   190
Thr Leu Asp Glu Ile Leu Asn Arg Tyr Gly Lys Asn Ala Asn Tyr Tyr

```
                 195                    200                    205
     Ile Glu Thr Lys Ser Pro Asp Val Tyr Pro Gly Met Glu Lys Gln Leu
         210                    215                    220
     Leu Asp Thr Leu Asp Lys His Asp Leu Leu Thr Gln Lys Ser Leu Lys
     225                    230                    235                    240
     His Gly His Val Met Ile Gln Ser Phe Ser Gly Ser Ser Leu Glu Lys
                 245                    250                    255
     Val His His Met Asn Ala Asn Ile Pro Leu Ile Arg Leu Met Asn Lys
                 260                    265                    270
     Phe Glu Leu Lys Lys Ala Thr Asn Gln Asp Leu Lys Asn Ile Lys Ser
                 275                    280                    285
     Tyr Ala Ile Gly Val Gly Pro Glu Tyr Thr Asp Leu Asn Ile Lys Asn
         290                    295                    300
     Thr Arg His Leu Lys Asn Leu Gly Phe Leu Val His Pro Tyr Thr Val
     305                    310                    315                    320
     Asp Asp Glu Asn Gln Met Arg Asn Leu Asn Gln Tyr Gly Val Asp Gly
                 325                    330                    335
     Val Phe Thr Asn Phe Ala Asp Arg Tyr Lys Lys Val Ser Glu Thr Gln
                 340                    345                    350
     Gln
```

<210> 5833
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5833
```
     Ala Thr Lys Ile Lys Asn Thr Ile His Gln Leu Ser Lys Tyr Ile Asn
     1               5                   10                  15
     Asn Glu Leu Glu His Ile Ala Thr Ile Lys Met Leu Ala His Phe Gly
                 20                  25                  30
     Lys Leu Tyr Phe Ile Asn Ser Phe Cys Lys Thr Val Leu Ile Tyr Asn
             35                  40                  45
     Ser
```

<210> 5834
<211> 173
<212> PRT
<213> S.epidermidis

<400> 5834
```
     Pro Lys Lys Ile Ser Lys Ala Leu Pro Val Ile Ile Thr Ala Gly Leu
     1               5                   10                  15
     Cys Asp Thr Phe Leu Ile Val Ile Ala Ile Leu Gly Val Ser Leu Ile
                 20                  25                  30
     Leu Ile Ser Met Pro Thr Leu Gln Leu Phe Ile Tyr Ile Ile Gly Phe
             35                  40                  45
     Leu Phe Leu Met Tyr Met Ala Trp Ser Leu Trp Thr Glu Lys Pro Ser
         50                  55                  60
     Asn Ile Glu Glu Ile Glu Pro Met Ser Ala Lys Lys Gln Ile Leu Phe
     65                  70                  75                  80
     Ala Leu Ser Val Ser Leu Leu Asn Pro His Ala Ile Met Asp Thr Val
                 85                  90                  95
     Gly Val Ile Gly Thr Ser Ala Ser Val Tyr Asp Gly Tyr Asp Lys Val
```

```
                  100                     105                     110
Val Phe Ser Leu Ala Thr Ile Ser Val Ser Trp Ile Trp Phe Val Phe
        115                    120                     125
Leu Ala Ile Leu Gly Arg Ile Thr Gly Lys Ile Asp Lys Ser Gly Lys
    130                    135                     140
Tyr Ile Val Ile Leu Asn Lys Val Ser Ser Val Ile Val Ile Ile Val
145                    150                     155                     160
Gly Leu Ile Ile Leu Lys Asn Ile Val Gly Ile Leu Ser
                   165                     170
```

<210> 5835
<211> 40
<212> PRT
<213> S.epidermidis

<400> 5835
```
Phe Glu Arg Ile Met Arg Leu Phe Lys Gln Phe Lys Tyr Tyr Ile Leu
1                   5                   10                      15
Val Phe Leu Tyr Arg Glu Val Leu Ala Asn Glu Ile Ile Ile Lys Phe
              20                    25                      30
Lys Phe Lys Ile Phe Lys Ser Pro
          35                    40
```

<210> 5836
<211> 484
<212> PRT
<213> S.epidermidis

<400> 5836
```
Val Ser Leu Ile Phe Met Val Tyr Leu His Lys Leu Met His Tyr Phe
1                   5                   10                      15
Thr Gly Gly Ile Val Met Ser Asn Lys Ala Trp Gly Gly Arg Phe Glu
              20                    25                      30
Thr Gln Pro Glu Glu Trp Val Asp Asp Phe Asn Ala Ser Ile Asp Phe
          35                    40                    45
Asp Lys Asn Leu Ile Lys Gln Asp Val Gln Gly Ser Ile Ala His Ala
    50                    55                      60
Thr Met Leu Ala Lys Gln His Ile Ile Thr Asp Asp Glu Ala Gln Ser
65                    70                    75                      80
Ile Ile Asn Glu Leu Lys Asn Ile Gln Ser Asp Phe Glu Glu Gly Lys
              85                    90                      95
Leu Lys Phe Lys Ala Ser Leu Glu Asp Ile His Leu Asn Ile Glu His
              100                   105                     110
Glu Leu Ile Gln Arg Ile Gly Glu Ala Gly Gly Lys Leu His Thr Gly
          115                   120                     125
Arg Thr Arg Asn Asp Gln Val Ala Thr Asp Met His Leu Tyr Thr Lys
    130                    135                     140
Glu Gln Val Gln Tyr Ile Ile Glu Leu Ile Ala Ser Phe Gln Glu Thr
145                    150                    155                     160
Ile Val Gln Leu Ala Asp Gln His Val Asp Thr Ile Met Pro Gly Tyr
              165                   170                     175
Thr His Leu Gln Arg Ala Gln Pro Ile Ser Phe Ala His His Ile Met
          180                   185                     190
Thr Tyr Phe Trp Met Leu Glu Arg Asp Lys Gly Arg Phe Met Asp Ser
          195                   200                     205
Leu Lys Arg Ile Asp Ile Ser Pro Leu Gly Ala Ala Ala Leu Ser Gly
```

```
            210                    215                    220
Thr Thr His Pro Ile Asp Arg His Leu Thr Gln Glu Leu Leu Gly Phe
225                    230                    235                    240
Ala Asn Leu Tyr Glu Asn Ser Leu Asp Ala Val Ser Asp Arg Asp Tyr
                245                    250                    255
Ile Val Glu Thr Leu His His Ile Ser Leu Thr Met Val His Leu Ser
                260                    265                    270
Arg Phe Ala Glu Glu Ile Ile Phe Trp Ser Thr Asp Glu Ala Lys Phe
            275                    280                    285
Ile Thr Leu Ser Asp Ala Phe Ser Thr Gly Ser Ser Ile Met Pro Gln
            290                    295                    300
Lys Lys Asn Pro Asp Met Ala Glu Leu Ile Arg Gly Lys Val Gly Arg
305                    310                    315                    320
Thr Thr Gly His Leu Met Ser Met Leu Val Thr Leu Lys Gly Leu Pro
                325                    330                    335
Leu Ala Tyr Asn Lys Asp Met Gln Glu Asp Lys Glu Gly Leu Phe Asp
                340                    345                    350
Ala Val His Thr Leu Lys Gly Ser Leu Arg Ile Phe Glu Gly Met Val
            355                    360                    365
Ala Ser Met Lys Val Asn Ser Asn Arg Leu Ser Gln Thr Val Lys Asn
            370                    375                    380
Asp Phe Ser Asn Ala Thr Glu Leu Ala Asp Tyr Leu Val Ser Lys Ser
385                    390                    395                    400
Val Pro Phe Arg Thr Ala His Glu Ile Val Gly Lys Ile Val Leu Asn
                405                    410                    415
Cys Ile His Lys Gly Ile Tyr Leu Leu Asp Val Pro Leu Ser Glu Tyr
            420                    425                    430
Gln Glu His His Glu Asn Ile Glu Glu Asp Ile Tyr Asp Tyr Leu Thr
            435                    440                    445
Pro Glu Asn Cys Leu Lys Arg Arg Gln Ser Tyr Gly Ser Thr Gly Gln
            450                    455                    460
Glu Ser Val Lys His Gln Leu Lys Val Ala Lys Ala Leu Leu Lys Asp
465                    470                    475                    480
Asn Glu Ser Lys
```

```
<210> 5837
<211> 559
<212> PRT
<213> S.epidermidis
```

```
<400> 5837
Ile Ile Met Met Asn His Ser Glu Ala Leu Thr Glu Gln Val Phe Ser
1                    5                    10                    15
Phe Ala Ser Glu Leu Tyr Ala Tyr Gly Val Arg Glu Val Val Ile Ser
                20                    25                    30
Pro Gly Ser Arg Ser Thr Pro Leu Ala Leu Val Phe Glu Ala His Pro
            35                    40                    45
Asn Ile Lys Thr Trp Ile His Pro Asp Glu Arg Ser Ala Ala Phe Phe
            50                    55                    60
Ala Leu Gly Leu Ile Lys Gly Ser Glu Lys Pro Val Ala Ile Leu Cys
65                    70                    75                    80
Thr Ser Gly Thr Ala Ala Ala Asn Tyr Thr Pro Ala Ile Ala Glu Ser
                85                    90                    95
Gln Ile Ser Arg Leu Pro Leu Val Val Leu Thr Ser Asp Arg Pro His
            100                    105                    110
```

```
Glu Leu Arg Ser Val Gly Ala Pro Gln Ala Ile Asn Gln Val Asn Met
        115                 120                 125
Phe Ser Asn Tyr Val Asn Phe Gln Phe Asp Leu Pro Ile Ala Asp Gly
    130                 135                 140
Ser Glu His Thr Ile Asp Thr Ile Asn Tyr Gln Met Gln Ile Ala Ser
145                 150                 155                 160
Gln Tyr Leu Tyr Gly Pro His Arg Gly Pro Ile His Phe Asn Leu Pro
            165                 170                 175
Phe Arg Glu Pro Leu Thr Pro Asp Leu Asp Arg Val Asp Leu Leu Thr
        180                 185                 190
Ser Val Thr Lys Thr Leu Pro His Tyr Gln Lys Ser Ile Ser Val Asp
        195                 200                 205
Asp Ile Lys Asp Ile Leu Gln Glu Lys Asn Gly Leu Ile Ile Val Gly
    210                 215                 220
Asp Met Gln His Gln Ala Val Asp Gln Ile Leu Thr Tyr Ser Thr Ile
225                 230                 235                 240
Tyr Asp Leu Pro Ile Leu Ala Asp Pro Leu Ser Gln Leu Arg Lys Glu
            245                 250                 255
Lys His Pro Asn Val Ile Thr Thr Tyr Asp Leu Leu Tyr Arg Ala Gly
            260                 265                 270
Leu Asn Leu Glu Val Asp Tyr Val Ile Arg Val Gly Lys Pro Val Ile
        275                 280                 285
Ser Lys Lys Leu Asn Gln Trp Leu Lys Lys Thr Asp Ala Tyr Gln Ile
    290                 295                 300
Ile Val Gln Asn Asn Asp Gln Ile Asp Val Phe Pro Thr Pro Pro His
305                 310                 315                 320
Ile Ser Tyr Glu Ile Ser Ala Asn Asp Phe Phe Arg Ser Leu Met Glu
            325                 330                 335
Glu Pro Leu Val Glu Arg Lys Lys Trp Leu Gln Gln Trp Gln Ser Leu
        340                 345                 350
Glu Gln Gln Ala Arg Ile Glu Ile Ser Asp Tyr Leu Lys His Ala Thr
        355                 360                 365
Asp Glu Ala Ala Tyr Val Gly Ser Leu Ile Gln Lys Leu Thr Lys Glu
    370                 375                 380
Asp Thr Leu Phe Val Gly Asn Ser Met Pro Ile Arg Asp Val Asp Asn
385                 390                 395                 400
Leu Leu Phe Asp Ser Glu Ala Ser Val Tyr Ala Asn Arg Gly Ala Asn
            405                 410                 415
Gly Ile Asp Gly Val Val Ser Thr Ala Leu Gly Met Ala Ala His Lys
        420                 425                 430
Asn Val Thr Leu Leu Ile Gly Asp Leu Ser Phe Tyr His Asp Met Asn
        435                 440                 445
Gly Leu Leu Met Ala Lys Leu Asn Glu Leu His Ile Asn Ile Val Leu
        450                 455                 460
Val Asn Asn Asn Gly Gly Gly Ile Phe Ser Tyr Leu Pro Gln Lys Arg
465                 470                 475                 480
Ser Ala Thr Lys Tyr Phe Glu Arg Leu Phe Gly Thr Pro Thr Gly Leu
            485                 490                 495
Asn Phe Glu Tyr Thr Ala Leu Leu Tyr Asp Phe Thr Phe Lys Arg Phe
            500                 505                 510
Asp Asn Leu Thr Asp Phe Lys Tyr Ala Glu Leu Ser Lys Met Gly Ser
        515                 520                 525
His Met Tyr Glu Val Ile Thr Asn Arg Asp Glu Asn Leu His Gln His
        530                 535                 540
Gln Asn Leu Tyr Gln Lys Leu Ser Glu Ile Val Asn Val Thr Leu
545                 550                 555
```

```
<210> 5838
<211> 148
<212> PRT
<213> S.epidermidis

<400> 5838
Gln Leu Ser Ile Arg Gln Ile Thr Phe Lys Cys Lys Asn Ser Cys Tyr
1               5                   10                  15
Ile Arg Tyr Ile Leu Met Glu His Gly Asp Ile Met Ser Lys Thr Pro
            20                  25                  30
Tyr Glu Leu Ile Gly Gln Lys Ala Leu Tyr Gln Met Ile Asp His Phe
        35                  40                  45
Tyr Gln Leu Val Glu Lys Asp Ser Arg Ile Asn His Leu Phe Pro Gly
    50                  55                  60
Asp Phe Lys Glu Thr Ser Arg Lys Gln Lys Gln Phe Leu Thr Gln Phe
65                  70                  75                  80
Leu Gly Gly Pro Asp Leu Tyr Thr Gln Glu His Gly His Pro Met Leu
            85                  90                  95
Lys Arg Arg His Met Glu Phe Thr Ile Ser Glu Tyr Glu Arg Asp Ala
            100                 105                 110
Trp Leu Glu Asn Met His Thr Ala Ile Gln His Ala Gln Leu Pro Ala
            115                 120                 125
Gly Val Gly Asp Tyr Leu Phe Glu Arg Leu Arg Leu Thr Ala Asn His
    130                 135                 140
Met Val Asn Ser
145

<210> 5839
<211> 612
<212> PRT
<213> S.epidermidis

<400> 5839
Ala Ile Gln Ile Ile Lys Glu Val Tyr Ile Met Ser Gln Gln Leu Thr
1               5                   10                  15
Arg Glu Glu Gln Glu Arg Lys Tyr Pro Glu Tyr Thr Trp Asp Leu Thr
            20                  25                  30
Thr Ile Phe Lys Ser Asp Glu Ala Phe Glu Glu Ala Phe Lys Ser Ile
        35                  40                  45
Glu Ala Lys Ile Gly Glu Glu Glu Lys Phe Lys Gly His Leu Gly Glu
    50                  55                  60
Ser Ala Glu Thr Leu Tyr Glu Ala Leu Ser Leu Glu Asp Glu Leu Gly
65                  70                  75                  80
Thr Lys Leu Glu Lys Val Tyr Val Tyr Ala His Leu Lys Gln Asp Gln
            85                  90                  95
Asp Thr Ala Asn Asp Lys Tyr Thr Gly Leu Glu Ala Arg Ala His Gln
            100                 105                 110
Leu Val Ile Lys Tyr Ser Ser Ala Trp Ser Phe Leu Val Pro Glu Ile
            115                 120                 125
Leu Gln Leu Asp Glu Ala Thr Ile Gln Ser Phe Ile Asp Ser Asn Asn
    130                 135                 140
Asp Leu Lys Arg Tyr Glu Phe Asp Leu Lys Leu Ile Asn Glu Lys Arg
145                 150                 155                 160
Pro His Ile Leu Asp Ala Asn Thr Glu Lys Leu Leu Thr Glu Ala Gln
                165                 170                 175
```

Asp Ala Leu Ser Thr Pro Ser Asn Val Tyr Gly Met Phe Ser Asn Ala
            180   185   190
Asp Leu Glu Phe Glu Asp Ala Ile Asp Lys Asp Gly Gln Ala Tyr Pro
            195   200   205
Leu Thr Gln Gly Thr Phe Ile Lys Tyr Leu Glu Ser Asp Asp Arg Glu
            210   215   220
Leu Arg Ala Ser Ala Phe Arg Asn Val Tyr Lys Ala Tyr Gly Ala His
225   230   235   240
Asn Asn Thr Leu Gly Ala Thr Leu Ala Gly Glu Val Lys Lys Asn Val
            245   250   255
Phe Asn Ala Arg Thr His His Tyr Arg Ser Ala Arg Glu Arg Ala Leu
            260   265   270
Ser Asn Asn His Ile Pro Glu Ala Val Tyr Asp Asn Leu Ile Lys Thr
            275   280   285
Val His Lys Tyr Leu Pro Leu Leu His Arg Tyr Thr Lys Leu Arg Gln
            290   295   300
Glu Leu Leu Gly Leu Asp Asp Leu Lys Met Tyr Asp Leu Tyr Thr Pro
305   310   315   320
Leu Val Lys Asp Val Lys Phe Glu Met Pro Tyr Glu Glu Ala Lys Ser
            325   330   335
Trp Met Leu Lys Ala Leu Glu Pro Met Gly Glu Glu Tyr Leu Asn Val
            340   345   350
Val Lys Lys Gly Leu Asp Asn Arg Trp Val Asp Val Tyr Glu Asn Lys
            355   360   365
Gly Lys Arg Ser Gly Gly Tyr Ser Ser Gly Gly His Leu Thr Asn Pro
            370   375   380
Phe Ile Leu Leu Asn Trp Ser Asp Thr Val Ser Asp Leu Tyr Thr Leu
385   390   395   400
Val His Glu Phe Gly His Ser Ala His Ser Tyr Phe Ser Arg Gln Asn
            405   410   415
Gln Pro Ser Asn Leu Ser Asp Tyr Thr Ile Phe Val Ala Glu Val Ala
            420   425   430
Ser Thr Cys Asn Glu Ala Leu Leu Ser Asp Tyr Met Asp Lys His Leu
            435   440   445
Asp Asp Glu Arg Arg Leu Leu Leu Leu Asn Gln Glu Leu Glu Arg Phe
            450   455   460
Arg Ala Thr Leu Phe Arg Gln Thr Met Phe Ala Glu Phe Glu His Lys
465   470   475   480
Ile His Gln Ile Glu Glu Ala Gly Glu Pro Leu Thr Pro Asn Arg Met
            485   490   495
Asn Glu Glu Tyr Ala Lys Leu Asn Lys Leu Tyr Phe Gly Glu Ala Val
            500   505   510
Glu Thr Asp Asp Asp Ile Ser Lys Glu Trp Ser Arg Ile Pro His Phe
            515   520   525
Tyr Met Asn Tyr Tyr Val Tyr Gln Tyr Ala Thr Gly Tyr Ser Ala Ala
            530   535   540
Gln Ser Leu Ser His Gln Ile Leu Thr Glu Gly Gln Pro Ala Val Glu
545   550   555   560
Arg Tyr Ile Asn Glu Phe Leu Lys Lys Gly Ser Ser Asn Tyr Pro Ile
            565   570   575
Glu Ile Leu Lys Asn Ala Gly Val Asp Met Thr Thr Pro Gln Pro Ile
            580   585   590
Glu Glu Ala Cys Glu Val Phe Glu Gln Lys Leu Asp Ala Phe Glu Lys
            595   600   605
Leu Met Lys Ala
            610

<210> 5840
<211> 49
<212> PRT
<213> S.epidermidis

<400> 5840
Arg Tyr Asn Leu Ser Met Ile Glu Ser Leu Cys His Tyr Lys Cys Lys
1   5   10   15
Gly Leu His Ile Cys Phe Ala Ser Arg Phe Ser Leu Phe His Thr Ile
            20   25   30
Gln Phe Phe Asp Tyr Asp Asp Ile Asp Ser Phe Tyr Cys Tyr Ile Lys
        35   40   45
Lys

<210> 5841
<211> 43
<212> PRT
<213> S.epidermidis

<400> 5841
Thr Ser Asn Phe Phe Thr Asn Gln Phe His Lys Thr Asn Ala Ile Ala
1   5   10   15
Ser Asn Gln Leu Ile Gln Thr Asn Phe Ile Ser Phe Lys Leu Thr Arg
            20   25   30
Ser Phe Ser Tyr Val Ile Ala Ile Pro Ile Ile
        35   40

<210> 5842
<211> 332
<212> PRT
<213> S.epidermidis

<400> 5842
Gly Glu Asn Val Met Lys Phe Ile Ser Asn Asn Asn Ile Asn Asp Pro
1   5   10   15
Ser Leu Asn Leu Ala Met Glu Glu Tyr Val Leu Lys Asn Leu Pro Ser
            20   25   30
Glu Glu Ser Tyr Phe Leu Phe Tyr Ile Asn Arg Pro Ser Ile Ile Val
            35   40   45
Gly Lys Asn Gln Asn Thr Ile Glu Glu Val Asn Gln Ala Tyr Ile Asp
        50   55   60
Lys His Gln Ile Asp Val Val Arg Arg Ile Ser Gly Gly Gly Ala Val
65   70   75   80
Tyr His Asp Thr Gly Asn Leu Asn Phe Ser Phe Ile Thr Asp Asp Asp
                85   90   95
Gly His Ser Phe His Asn Phe Lys Lys Phe Thr Met Pro Ile Val Gln
            100   105   110
Ala Leu Gln Ser Met Gly Val Asn Ala Glu Met Thr Gly Arg Asn Asp
            115   120   125
Ile Gln Val Gly Gln Ala Lys Ile Ser Gly Asn Ala Met Val Lys Val
        130   135   140
Lys Asn Arg Met Phe Ser His Gly Thr Leu Met Leu Asn Cys Asp Leu
145   150   155   160
Asn Glu Val Gln Lys Ala Leu Lys Val Asn Pro Ala Lys Ile Lys Ser

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                    165                    170                     175
Lys Gly Val Lys Ser Val Arg Lys Arg Val Ala Asn Ile Glu Glu Phe
            180                    185                    190
Leu Glu Gln Pro Ile Asp Ile Glu Glu Phe Lys Lys Ile Ile Leu Lys
            195                    200                    205
Thr Ile Phe Gly Glu Asn Glu Val Glu Glu Tyr Ile Leu Thr Glu Glu
            210                    215                    220
Asp Trp Lys Asn Ile Lys Gln Leu Ser Asp Glu Lys Tyr Arg Thr Trp
225                    230                    235                    240
Glu Trp Asn Tyr Gly Ser Asn Pro Lys Tyr Asn Ile Glu Arg Glu Glu
            245                    250                    255
Lys Phe Glu Lys Gly Phe Ile Gln Ile Lys Leu Asp Val Lys Lys Gly
            260                    265                    270
Arg Ile Glu Arg Ala Lys Leu Phe Gly Asp Phe Phe Gly Glu Gly Asp
            275                    280                    285
Val Thr Glu Leu Glu His Ala Leu Val Gly Cys Leu His Asp Phe Glu
            290                    295                    300
His Ile Glu Glu Ala Leu Gln Asn Tyr Asp Phe Tyr His Tyr Phe Gly
305                    310                    315                    320
Asp Ile Asp Lys Tyr Glu Ile Ile Arg Leu Met Ser
            325                    330
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<210> 5843
<211> 168
<212> PRT
<213> S.epidermidis

<400> 5843
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Thr Tyr Val Val Asn Ile Leu Lys Arg Ser Ala Asn Met Ser Arg Lys
1                   5                    10                     15
Thr Tyr Glu Lys Ile Ala Asn Ile Asn Gly Met Phe Asn Val Leu Glu
            20                    25                     30
Gln Gln Ile Ile His Ser Lys Asp Met Ala Leu Phe Arg Asn Glu Phe
            35                    40                     45
Phe Tyr Val Asn His Glu His Arg Glu Asn Tyr Glu Ala Leu Leu Ile
            50                    55                     60
Tyr Tyr Lys Asp Ser Leu Asp Asn Pro Val Val Asp Gly Ala Cys Tyr
65                    70                    75                     80
Ile Leu Ala Leu Pro Glu Ile Phe Asn Lys Val Asp Val Phe Glu Ser
                  85                    90                     95
Asp Leu Pro Phe Thr Trp Val Tyr Asp Glu Asn Gly Leu Ser Asp Thr
            100                   105                    110
Met Lys Ser Ile Ser Val Pro Leu Gln Tyr Leu Ile Ala Ala Ala Leu
            115                   120                    125
Glu Val Thr Asp Val Asn Ile Phe Lys Pro Ser Gly Phe Thr Met Gly
            130                   135                    140
Met Asn Asn Trp Asn Ile Ala Gln Leu Arg Ile Phe Trp Gln Tyr Cys
145                   150                   155                    160
Ala Ile Val Arg Lys Glu Ala Leu
                  165
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<210> 5844
<211> 72
<212> PRT
<213> S.epidermidis

<400> 5844
Ile Phe Gly Val Ala Thr Asn His Leu Lys Glu Ser Gly Leu Thr Asn
1   5   10   15
Val Lys Gly Leu Met Arg Ile Ile Ile Glu Lys Pro Phe Gly Asp Asp
            20   25   30
Leu Lys Ser Ala Lys Lys Leu Asn Asn Gln Ile Ser Lys Ser Phe Lys
        35   40   45
Glu Glu Glu Ile Phe Gly Ile Gly His Tyr Leu Ser Lys Glu Met Ile
    50   55   60
Gln Asn Ile Glu Arg Leu Arg Phe
65   70

<210> 5845
<211> 264
<212> PRT
<213> S.epidermidis

<400> 5845
Ile Asn Leu Val Arg Phe Lys Met Lys Ala Phe Val Glu Ala Val Asp
1   5   10   15
Glu Leu Gly Gly Ile Tyr Tyr Asp Val Pro Tyr Asn Leu Asn Glu Pro
            20   25   30
Asn Ser Asp Asp Thr Gly Arg Ile Lys Ile Lys Lys Gly Tyr Gln Lys
        35   40   45
Leu Asn Gly Asp Gln Ala Leu Ala Val Ala Arg Thr Arg His His Asp
    50   55   60
Ser Asp Leu Lys Arg Gly Gln Arg Gln Met Glu Leu Ile Lys Ile Leu
65   70   75   80
Phe Gln Lys Ala Gln Asn Leu Lys Ser Ile Asp Lys Leu Asp Asn Val
                85   90   95
Ile Ser Ile Val Gly Lys Asn Ala Lys His Asn Leu Thr Gln Lys Glu
            100   105   110
Ile Lys Ser Leu Ala Lys Met Tyr Leu Gly Gly Ser Thr Glu Ile Lys
        115   120   125
Thr Ser Gln Leu Lys Gly Lys Asp Asp Tyr Leu Asn Asp Ile Tyr Tyr
    130   135   140
Tyr His Pro Ser Val Lys Ser Ile Met Glu Tyr Ser Asn Leu Leu Arg
145   150   155   160
Asn Asp Leu Asp Leu Ser Lys Ile Thr Asn Lys Asn Asp Phe Leu Asp
            165   170   175
Gln Arg Val Ile Lys Arg Tyr Gly Ser Leu Val Pro Leu Thr Glu Leu
            180   185   190
Asp Glu Asp Leu Leu Arg Lys Asn Gln Lys Glu Ser Thr Asp Ser Gln
        195   200   205
Lys Glu Ser Asp Ser Ser Ser Gln Asn Asn Asp Glu Glu Asp Gln Thr
    210   215   220
Asn Glu Gln Thr Asp Gln Asn Ser Leu Asn Gly Asn Glu Gln Tyr Pro
225   230   235   240
Asn Gln Gln Asp Asn Asn Gln Thr Asn Gly Glu Asn Gly Met Ile Asn
            245   250   255
Asn Asp Asn Tyr Pro Tyr Ala Gln
            260

<210> 5846
<211> 77
<212> PRT

<213> S.epidermidis

<400> 5846
Lys Val Val Val Phe Met Asn His Asn Thr Glu Val Lys Tyr Thr Thr
1   5   10   15
Leu Glu Asp Phe Val Met Thr Val Asn Asp Leu Gly Val Glu Leu Val
            20   25   30
Ile Glu Glu Ala Leu Arg Asn Ala Arg Lys Ala Lys Leu Lys Leu Leu
            35   40   45
Ile Asp Glu Ala Leu Ile Asn Lys Asn Glu Asn Asp Phe Ile Gln Tyr
        50   55   60
Thr Asn Glu Phe Lys Gln Leu Glu Ala Phe Leu Ser Glu
65   70   75

<210> 5847
<211> 80
<212> PRT
<213> S.epidermidis

<400> 5847
Tyr Asn Thr Val Lys Tyr Pro Phe Gln Pro Leu Phe Ile His Lys Thr
1   5   10   15
Lys Leu Ser Gln Ser Val His Ile Val Ser Glu Phe Asn Ser Thr Lys
            20   25   30
Leu Ser Leu Thr Phe Gln Lys His Leu Ile Phe Val Arg Ile Leu His
            35   40   45
Lys Leu Pro Leu Leu Val Glu Val Leu Ser Cys Gln His Leu His Phe
        50   55   60
Leu Ile Phe Gln Ser Asp Ser Leu Ser Tyr Pro Phe Leu Arg Ile His
65   70   75   80

<210> 5848
<211> 1076
<212> PRT
<213> S.epidermidis

<400> 5848
Glu Met Lys Val Val Lys Asp Met Ile Pro Thr Lys Pro His Asp Val
1   5   10   15
Ile Trp Thr Asp Ala Gln Trp Gln Ser Ile Tyr Ala Lys Gly Gln Asp
            20   25   30
Ile Leu Val Ala Ala Ala Ala Gly Ser Gly Lys Thr Ala Val Leu Val
            35   40   45
Glu Arg Ile Ile Gln Arg Ile Leu Arg Asp Glu Val Asp Val Asp Arg
        50   55   60
Leu Leu Val Val Thr Phe Thr Asn Leu Ser Ala Arg Glu Met Lys His
65   70   75   80
Arg Val Asp Lys Arg Ile Gln Glu Ala Ser Phe Lys Asp Pro Asn Asn
                85   90   95
Glu His Leu Lys Asn Gln Arg Ile Lys Ile His Gln Ala Gln Ile Ser
            100   105   110
Thr Leu His Ser Phe Cys Leu Lys Leu Ile Gln Gln His Tyr Asp Val
            115   120   125
Leu Asp Ile Asp Pro His Phe Arg Thr Ser Ser Glu Ala Glu Asn Ile
        130   135   140
Leu Leu Leu Glu Gln Thr Ile Asp Asp Val Leu Glu Gln His Tyr Asp

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145                     150                     155                     160
Lys Leu Asp Pro His Phe Ile Glu Leu Thr Glu Gln Leu Ser Ser Asp
                165                     170                     175
Arg Asn Asp Asp Gln Phe Arg Ser Ile Ile Lys Gln Leu Tyr Phe Phe
                180                     185                     190
Ser Ile Ala Asn Pro Gln Pro Phe Glu Trp Leu Asn Gln Leu Ala Gln
                195                     200                     205
Pro Tyr Lys Glu Glu Asn Lys Gln Arg Glu Leu Met Gln Leu Ile Asn
    210                     215                     220
Asp Leu Ala Met Ile Phe Met Lys Ala Gly Tyr Glu Glu Leu Gln Lys
225                     230                     235                     240
Ser Tyr Asp Leu Phe Ser Met Met Glu Ser Val Asp Lys Gln Leu Glu
                245                     250                     255
Val Ile Glu Thr Glu Arg Met Phe Ile Thr Lys Ala Ile Glu Gly Lys
                260                     265                     270
Val Leu Asn Thr Asp Val Ile Thr Gln His Glu Phe Met Ser Arg Phe
                275                     280                     285
Pro Ala Ile Asn Ser Lys Ile Lys Glu Ala Asn Glu Gly Met Glu Asp
    290                     295                     300
Ala Leu Asn Glu Ala Lys Gln His Tyr Asp Lys Tyr Lys Ser Leu Val
305                     310                     315                     320
Met Lys Val Lys Asn Asp Tyr Phe Ser Arg Asn Ala Glu Asp Leu Gln
                325                     330                     335
Arg Asp Met Gln Gln Leu Ala His Arg Val Ala Tyr Leu Ala Gln Ile
                340                     345                     350
Val Gln Asp Val Ile Gln Ser Phe Gly Val Gln Lys Arg Ser Arg Asn
                355                     360                     365
Ile Leu Asp Phe Ser Asp Tyr Glu His Phe Ala Leu Arg Ile Leu Thr
    370                     375                     380
Asn Glu Asp Gly Ser Pro Ser Arg Ile Ala Glu Thr Tyr Arg Glu His
385                     390                     395                     400
Phe Lys Glu Ile Leu Val Asp Glu Tyr Gln Asp Thr Asn Arg Val Gln
                405                     410                     415
Glu Lys Ile Leu Ser Cys Ile Lys Thr Gly Glu Glu His Asp Gly Asn
                420                     425                     430
Leu Phe Met Val Gly Asp Val Lys Gln Ser Ile Tyr Lys Phe Arg Gln
                435                     440                     445
Ala Asp Pro Ser Leu Phe Ile Glu Lys Tyr Asn Arg Phe Ser Ser Ser
    450                     455                     460
Gly Thr Glu Ser Gly Leu Arg Ile Asp Leu Ser Gln Asn Phe Arg Ser
465                     470                     475                     480
Arg Gln Glu Val Leu Ser Thr Thr Asn Tyr Leu Phe Lys His Met Met
                485                     490                     495
Asp Glu Gln Val Gly Glu Ile Ser Tyr Asp Asp Ala Ala Gln Leu Tyr
                500                     505                     510
Phe Gly Ala Pro Tyr Asp Glu Val Ser His Pro Val Gln Leu Arg Ala
                515                     520                     525
Leu Ile Glu Ala Ser Ser Glu Asn Ser Asp Leu Thr Gly Ser Glu Gln
    530                     535                     540
Glu Ala Asn Tyr Ile Val Glu Gln Val Lys Asp Ile Ile Asn His Gln
545                     550                     555                     560
Asn Val Tyr Asp Met Lys Thr Gly Gln Tyr Arg Lys Ala Thr Tyr Lys
                565                     570                     575
Asp Ile Val Ile Leu Glu Arg Ser Phe Gly Gln Ala Arg Asn Leu Gln
                580                     585                     590
Gln Ala Phe Lys Asn Asn Asp Ile Pro Phe His Val Asn Ser Lys Glu
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